



Technology Leadership
for Digital Cinema

CineAsset

Digital Cinema Mastering Software

User Manual

Version 2.2

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Software License Agreement

The software license agreement can be found at the following location:
<http://www.doremilabs.com/support/cinema-support/cinema-warranties/>

1 Introduction

Doremi's CineAsset Software Suite is a software based digital cinema mastering solution that converts popular video and image files to encrypted or unencrypted DCP files that can be played back on digital cinema servers. CineAsset encodes the audio and video files then wraps them into an MXF container enabling these files to be ingested and played back on the DCP-2000, DCP-2K4, DC-Post and other digital cinema servers. You can now convert, transfer, and playback 2D or 3D video clips such as local advertising, promotions, regional announcements or special interest content, and even full length features with the CineAsset solution.

The CineAsset Editor is used to create the 2D or 3D compositions from audio/video files (QuickTime, MXF, AVI, WMV, etc.) or image sequences (TIFF, JPEG, BMP, TARGA, etc.) apply filters such as Color conversion and add encryption. CineAsset Editor seamlessly passes the composition to CineAsset Schedule, which handles the conversion and encryption and places the DCP in the database. Once the DCP is in the database, the CineAsset GUI is used to generate KDMs, if the content is encrypted, and transfer the DCPs to a server.

CineAsset now includes a DCP Player application called CinePlayer. CinePlayer can be used to QC encrypted and unencrypted DCPs. DCPs in the CineAsset database can be sent to CinePlayer for playback with the click of a button. CinePlayer can also playback encrypted and unencrypted DCPs generated by anyone as well as any video file type supported by CineAsset.

Moreover, for Mac users, CineAsset includes Doremi CineExport. Doremi CineExport is a software plug-in for Apple's Compressor application and allows the creation of Digital Cinema Packages (DCP) from Final Cut Pro sequences and other common video files.

1.1 System Requirements

CineAsset software works on Windows XP Professional or Windows 7 and Mac OS X operating systems.

- **Windows:**
OS : XP, Vista, Windows 7.
RAM : 1GB minimum, recommended 512MB/core (example Quad Core => 2 GB).
Pentium IV 3.0GHz, recommended Quad Core.
- **MAC:**
OS: 10.6.X and above.
RAM : 1GB minimum, recommended 512MB/core (example Quad Core => 2 GB).
Dual core, recommended Quad Core.

1.2 Software Version

The current software version that this manual pertains to is 6.2.x and above.

1.3 Contact

If in need of help or assistance, please contact Doremi Labs Technical Services:

USA

24/7 Technical Services line: + 1-866-484-4004

Technical Services Email: cinemasupport@doremilabs.com

Europe

24/7 Technical Services line: + 33 (0) 492-952-847

Technical Services Link: <http://support.doremitechno.org/ticketing>

Japan

Technical Services line: + 044-966-4855

Technical Services Email: support@doremilabs.co.jp

Australia ~ China ~ India ~ Indonesia ~ Korea ~ Malaysia ~ New Zealand ~ Philippines ~ Singapore ~ Taiwan ~ Thailand

Technical Services Email: supportasia@doremilabs.com

1.4 Database Notice

The database structure for this version of CineAsset has changed and is not backwards compatible with version 6.0.0 or lower. When the software loads for the first time, we suggest that you create a new database instead of using an existing one.

2 CineAsset Set Up

2.1 Installation

- Install the application by double-clicking on the *CineAsset.exe* icon. It is recommended to reboot after the installation is complete.
- For Mac users, the Doremi CineExport Compressor plug-in must be installed separately and in addition to the CineAsset application. To install Doremi CineExport, double-click on the CineExport 1.0.x.dmg file to mount the disk image. Then, double-click on the CineExport 1.0.x.pkg file and follow the onscreen instructions to install the plug-in.

Note: For Windows users, Quicktime Player needs to be installed prior to beginning the installation process.

2.2 USB Dongle

- A licensed CineAsset USB dongle is required to wrap files longer than 15 seconds and without an embedded Doremi logo as shown below (Figure 1):



Figure 1: Embedded Doremi Logo

- To obtain a USB dongle contact sales@doremilabs.com.

2.3 USB Dongle and DCP Encryption

- CineAsset Unregistered and Pro versions can be used to encrypt content and generate KDMs for the encrypted content. CineAsset Standard version does not support encryption.
- The certificates and private keys used by CineAsset Unregistered version are not unique to each installation. This means KDMs can be generated by any CineAsset installation for any content that has been encrypted with an Unregistered version.
- CineAsset Pro version uses a unique private key that is stored on the Pro dongle. This means KDMs can only be generated for content that has been encrypted with a Pro dongle, if that same dongle is present. To obtain a Pro dongle or to upgrade an existing Pro dongle, contact sales@doremilabs.com.

2.4 Tool Bar Icon Description

CineAsset runs as a service indicated by an icon in the right section of the tool bar on the PC desktop (Figure 2). For Mac OS X platform, the icon will be located in the upper-right corner of the screen (Figure 3).

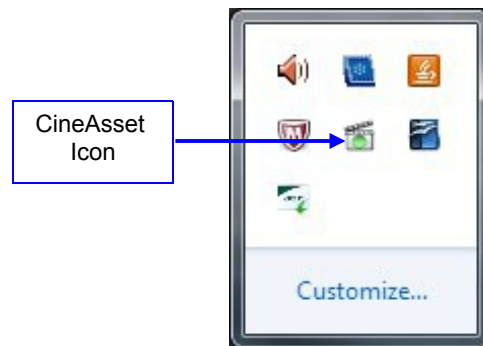


Figure 2: CineAsset Icon on Windows PC Desktop



Figure 3: CineAsset Icon on Mac OS X Platform

- The Tool bar icon color indicates the current status.
 - GREEN circle indicates status is good (Figure 2)
 - AMBER circle appears when processing tasks.
 - RED circle will appear in the event of a failure.
- To exit the CineAsset application, right-click on the tool bar icon and select "Quit CineAsset".

2.5 Database and Drop-In Folders Set Up

2.5.1 Database Folder

When running CineAsset software for the first time, it will automatically create a database folder. The database folder will be found at the following location: **~/Doremi CineAsset/Default_DCinema**. The database (DB) folder created inside this folder will hold all the content that is encoded and wrapped using CineAsset. The database location can be configured to the internal drive, a USB or Firewire drive, or on a networked drive. Databases stored on Network drives can be shared between different CineAsset installations on the same network.

2.5.1.1 Changing the Database Folder

1. To change the database folder, go to the “Database” menu of the CineAsset GUI (Graphical User Interface) and click on “Change Location,” which opens the “Database” window (Figure 4).
2. In the “Database” window, click on the “Change” button to open an explorer window and browse for the new database folder (Figure 4).

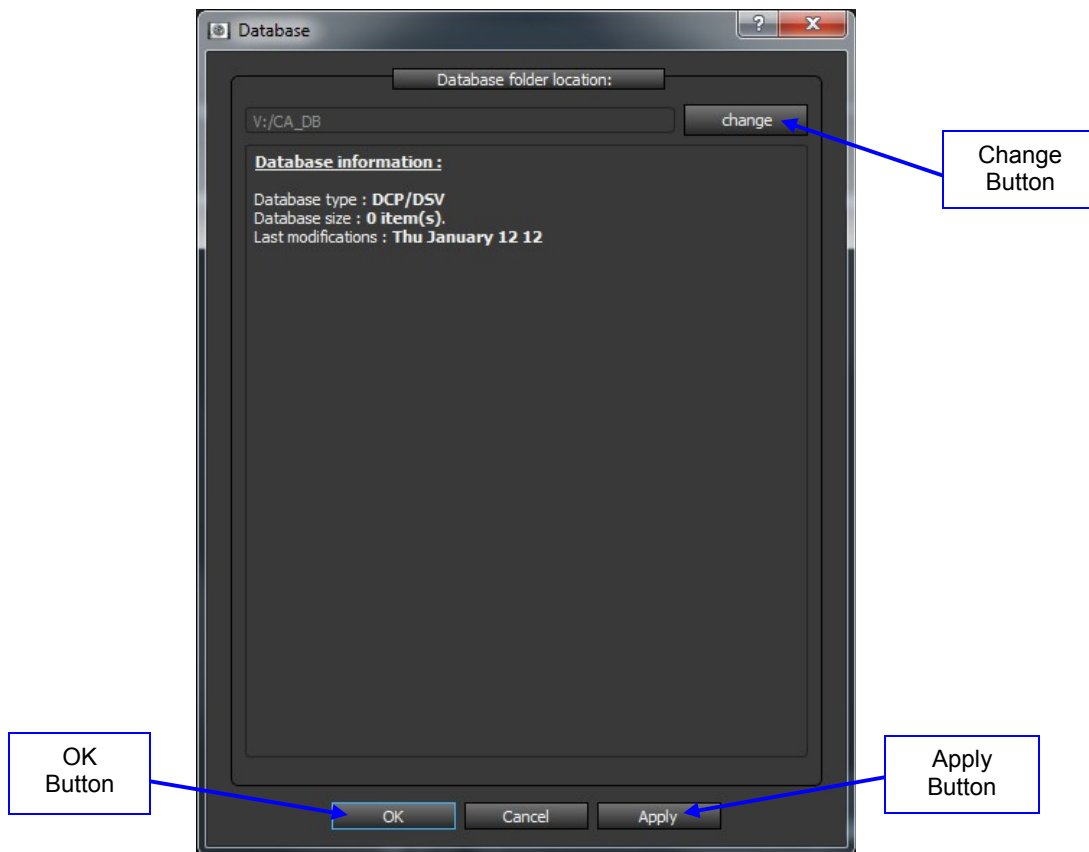


Figure 4: Database Window

3. Select the desired database folder and click on the “Select Folder” button in the explorer window.
4. You will then be back to the “Database” window (Figure 4).
5. Click the "Apply" button then "Ok" button to finalize the database change (Figure 4).
- The database folder can also be changed by clicking the “Change...” button at the top of the CineAsset GUI's Database tab (Figure 5). Clicking the “Change...” button will open the “Database” window. Then follow the steps above to change the database folder location.

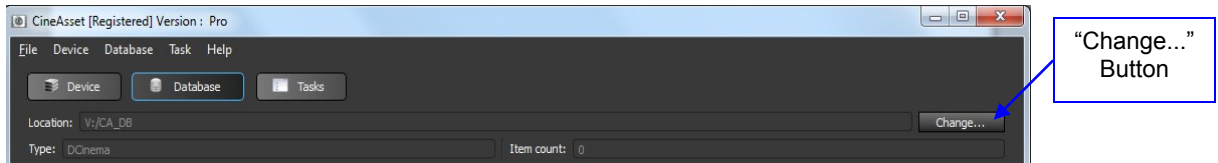


Figure 5: Change Button on Database Tab

2.5.2 Drop-In Folders

When media is placed into a drop-in folder, it will be automatically imported to the CineAsset database. For each drop-in folder, you can define different encoding profiles and each drop-In folder can either be used with Video Files or Image Sequences.

- To create a new drop-In folder:
 1. From the “File” menu, select “Drop-in folder Manager...” or press F2.
 2. In the drop-in folder manager window, click on the "New..." button to add a drop-in folder (Figure 6).
 3. Select either “Video Files” or “Picture Folders” for the selected drop-in folder (Figure 6). Selecting video files allows video files such as .mov to be add to the drop-in folder; selecting picture folders allows a folder containing an image sequence to be added to the drop-in folder.
 4. Click the “...” button next to the “Source” text box and select a folder to be used (Figure 6) as the “Drop-In” folder.
 5. Click the “...” button next to the Destination and choose a destination for the encoded DCP (Figure 6). If this setting is unchanged, the DCP will be added to the CineAsset Database.
 6. Choose a profile using the “Profile” drop-down box to define the encoding parameters for media added to the drop-in folder (Figure 6).
 7. When finished, click the “Close” button (Figure 6).

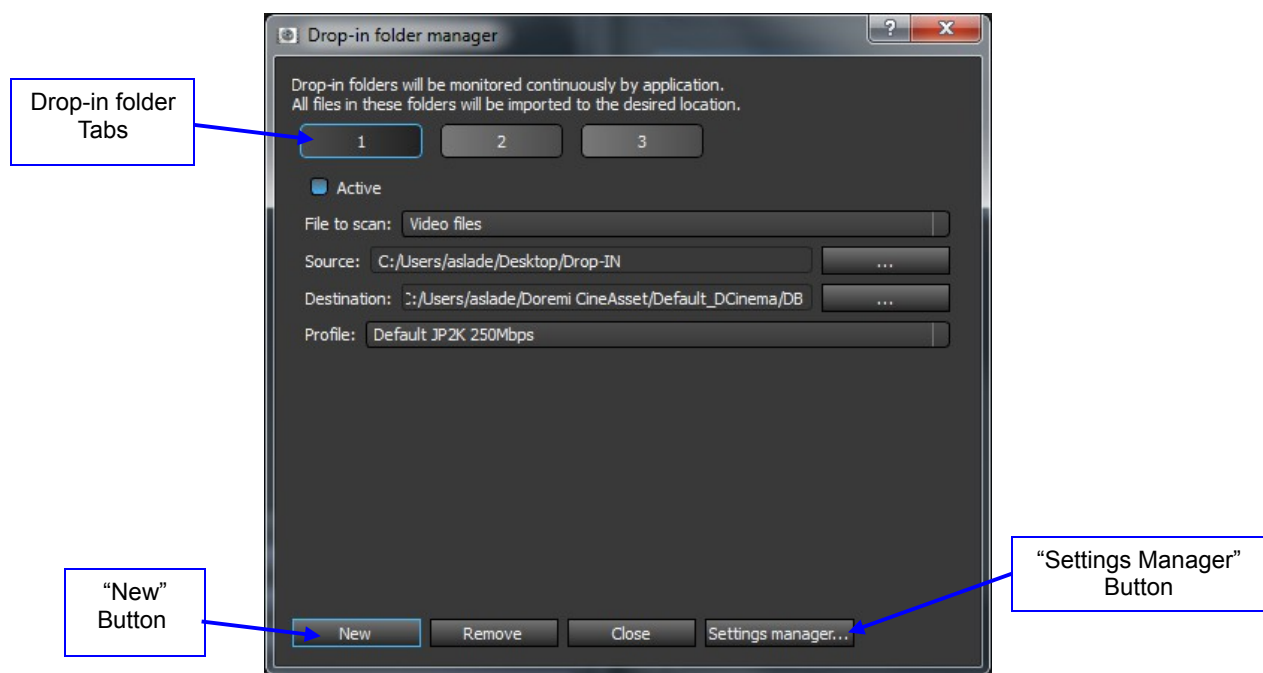


Figure 6: Drop-In Folder Manager Window

3 Using CineAsset

- CineAsset is a software suite that consists of three applications.
 1. CineAsset GUI
 2. CineAsset Editor
 3. CinePlayer
- The individual applications can be accessed from the CineAsset folder in the start menu or by right-clicking on the CineAsset icon in the task bar (Figure 7).

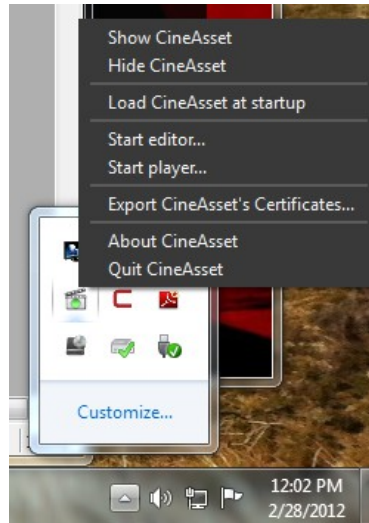


Figure 7: CineAsset Task Bar Menu

- To launch the CineAsset GUI, select “Show CineAsset.”
- To launch the CineAsset Editor, select “Start editor..”
- To launch the CineAsset DCP Player, select “Start Player..”

3.1 CineAsset GUI

The CineAsset Graphical User Interface (GUI) is shown in Figure 8 below. This GUI contains three separate function tabs:

- Device tab: used to manage the Doremi devices.

- Clip database tab” used to manage the CineAsset database and transfer DCPs.
- Tasks tab: displays the tasks list and their associated log information.

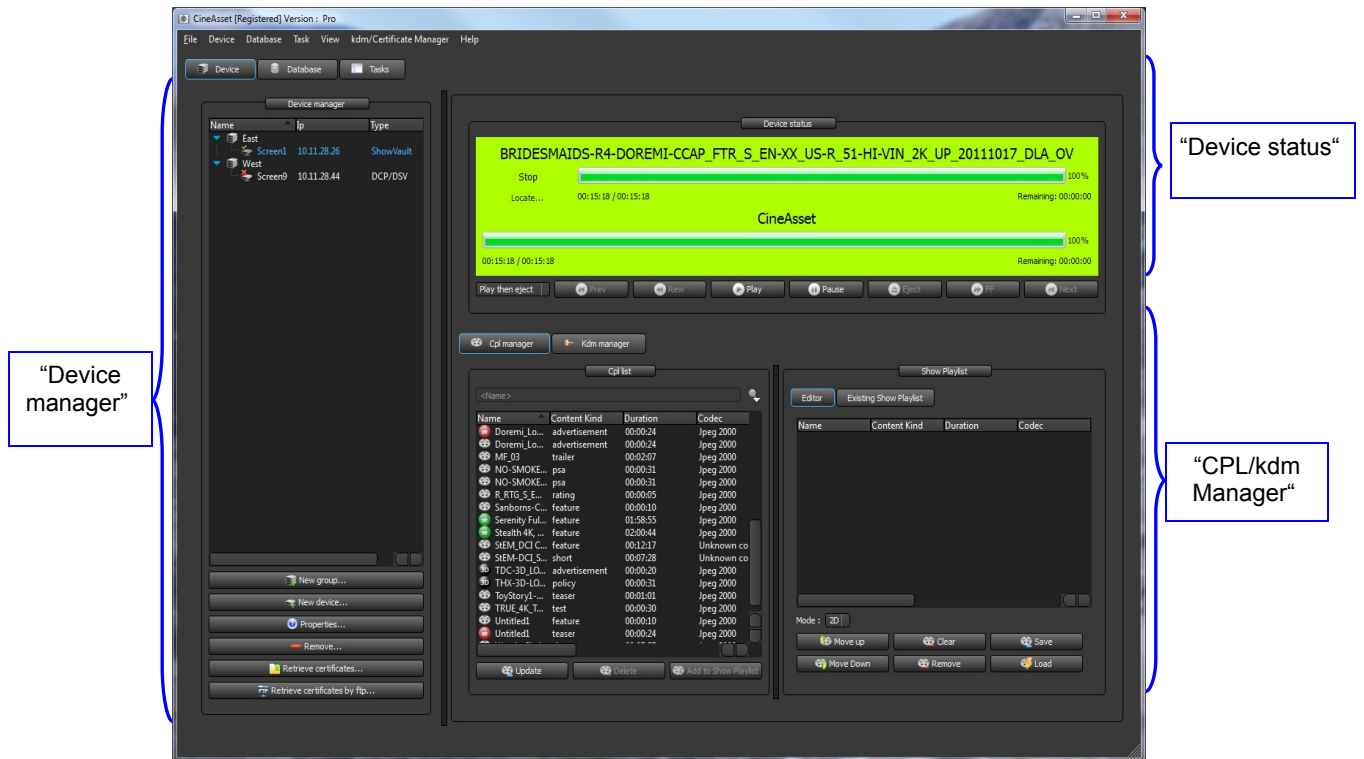


Figure 8: CineAsset Device Tab

3.1.1 Device Tab

The Device tab contains three different sections: “Device manager,” “Device status,” and “CPL/kdm Manager” (Figure 8).

3.1.1.1 Device Manager

The "Device Manager" can be used to manage Doremi networked devices and to organize them by creating groups.

- To create a new group:
 1. Click the “New Group...” button in the bottom left corner of the device tab (Figure 11).
 2. In the “Devices group” pop-up window, type the name for the new group (Figure 9).
 3. Click “OK” and the new group will be created and displayed in the Device manager (Figure 11).

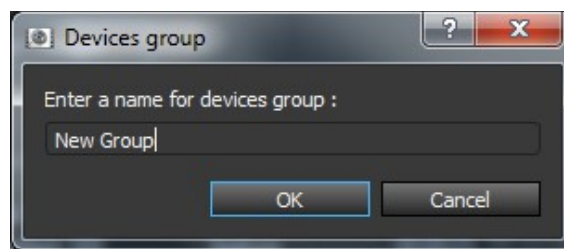


Figure 9: “New group:” Dialog Box

To add a new device:

1. Click the “New Device...” button in the bottom left corner of the device tab.
2. In the “Device properties” pop-up window, type the name and the IP address for the new Device.
3. Select which group the new device will be added to from the Group drop down-box (Figure 10).
4. Click “OK” and the device will be added to the selected group and displayed in the Device Manager (Figure 11).

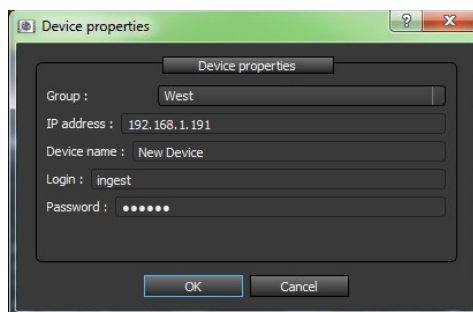


Figure 10: “New device:” Dialog Box

- To edit an existing Device or Group, select it in the device manager and press the “Properties” button (Figure 11).
- To remove an existing Device or Group, select it in the Device Manager and press the “Remove” button (Figure 11).

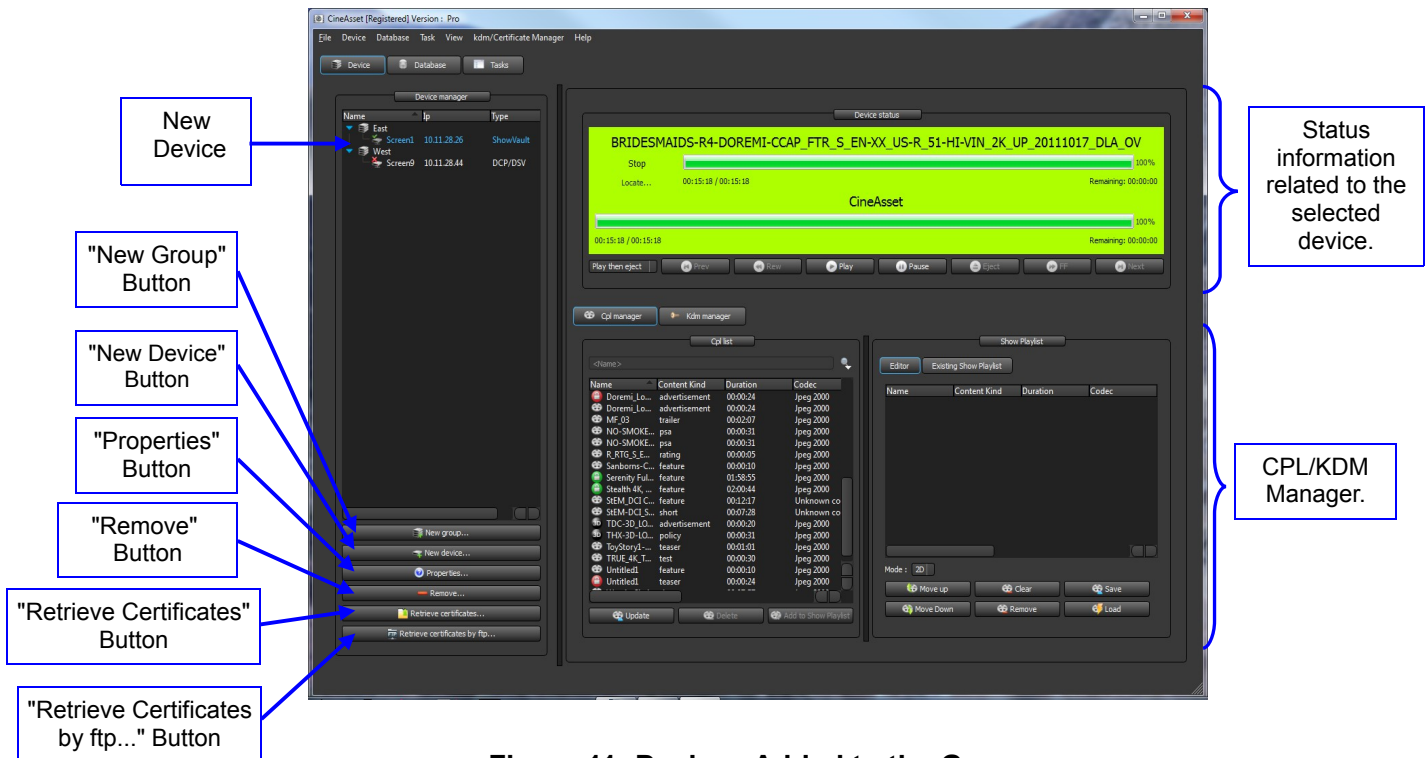


Figure 11: Devices Added to the Group

3.1.1.2 Retrieving Certificates

CineAsset 6.x can generate encrypted DCPs and also create KDMs for any DCP encrypted by CineAsset. To Generate a KDM for a specific server, the certificates from that server need to be used.

- Certificates can be retrieved from any server in the device manager by selecting the server and pressing the “Retrieve certificates...” button (Figure 11).
- Certificates for any Doremi server can also be retrieved from the Doremi Service Public FTP site by pressing the “Retrieve certificates by ftp...” button.
 1. Pressing the “Retrieve certificates by ftp...” button will launch the Retrieval Properties window (Figure 12).
 2. Select a destination folder for the certificates by pressing the “Browse” button and selecting a folder (Figure 12).
 3. Type the serial number into the “Serial Number” field and press “Add SN”.
 4. Click the “Retrieve” button and the certificates will be downloaded from the FTP site and saved to the selected destination folder (Figure 12).

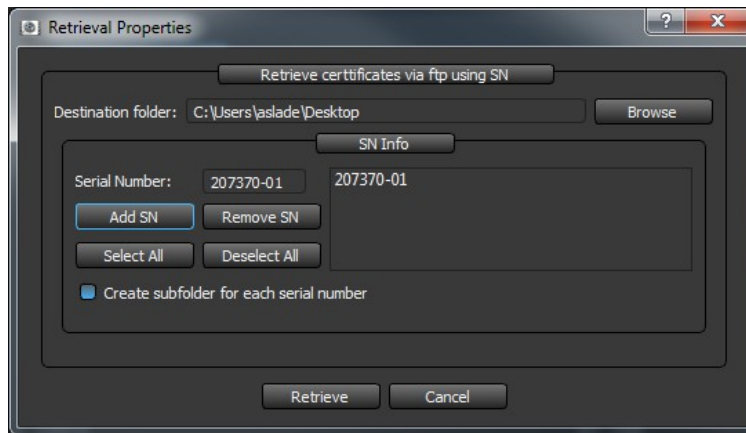


Figure 12: Retrieval Properties window

- The CineAsset application also has its own certificates that can be used to generate KDMs for a specific CineAsset installation. This allows content encrypted elsewhere to be viewed with the CineAsset DCP player.
 - To retrieve the CineAsset certificates, go to the “File” menu and select “Export CineAsset's certificates” (Figure 13).

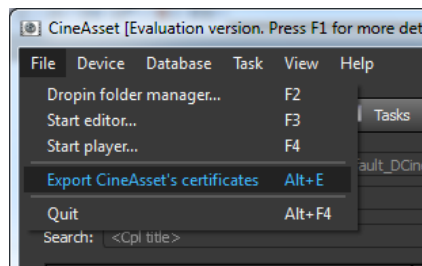


Figure 13: Export CineAsset Certificates

3.1.1.3 Device Status

The “Device status” section displays the current status of the selected device as shown in (Figure 14). It also provides transport control buttons.

Note: The Transport Control feature only works when using the DCP-2000, DCP-2K4 or DC-Post Doremi products.

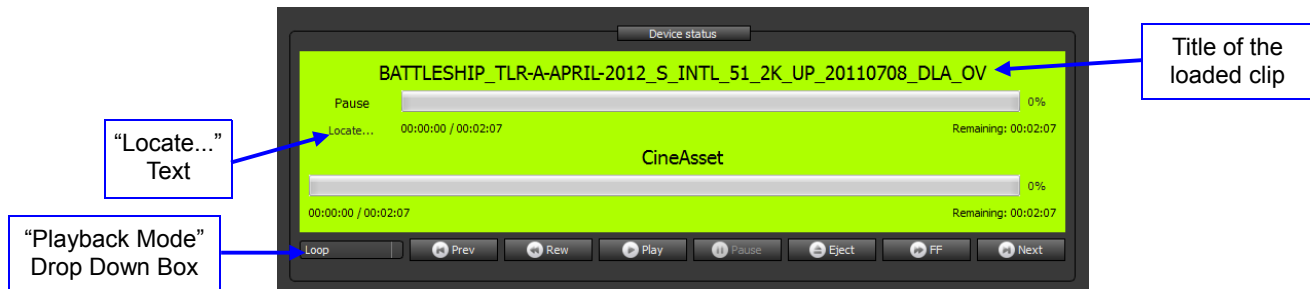


Figure 14: Device Status Window

- To locate to a specific timecode location, click the “Locate...” text and the “Locate time code” window will appear (Figure 15). Type in the desired timecode location and press Locate.
- The playback behavior of the playlist can be adjusted using the Playback Mode drop-down box (Figure 14). The selections include the following:
 1. Loop
 2. Play then Rewind
 3. Play then Eject

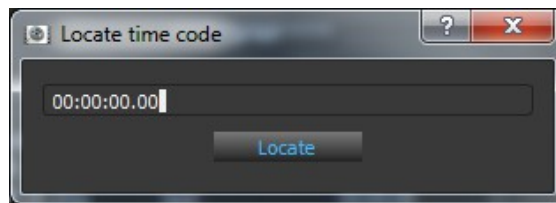


Figure 15: Locate Window

3.1.1.4 CPL Manager

The CPL Manager is used to manage the DCPs on the connected devices, create playlists, and load playlists for playback (Figure 11).

- The CPL manager consists of two sections: Clip List and Show Playlist.
- The Clip List shows all the available clips on the selected device.
 - To delete a clip, select the clip title in the clip list and press Delete.
 - Use the Update button to update the clip list after ingesting new content.

- Playlists are used to playback the content that is on the connected servers.
- The Show Playlist section contains two tabs:
 - Editor tab – used to create a new playlist and edit existing playlists
 - Existing Show Playlist tab – used to load and manage existing playlists.
- To load an existing playlist:
 1. Click the Existing Show Playlist tab
 2. Select an existing playlist from the list
 3. Press the Load button

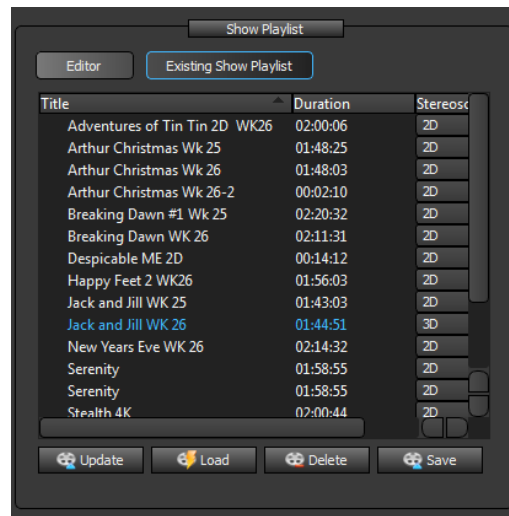


Figure 16: “CPL Manager – Existing show Playlist” Tab

- To create a new playlist:
 1. Click the Editor tab.
 2. Select the desired clip in the Clip List and press the “Add to Show Playlist” button (Figure 17). One or multiple clips can be added to the Show Playlist.
 3. Press the Load button to load the current playlist for playback.
 4. To save the current playlist, press the Save button (Figure 17). Type a name for the playlist in the pop-up window and press OK.
 5. To remove a clip from the current playlist, highlight the clip in the show playlist and press the remove button.
 6. Use the “Move Up” and “Move Down” buttons to re-arrange the order of clips in the playlist.

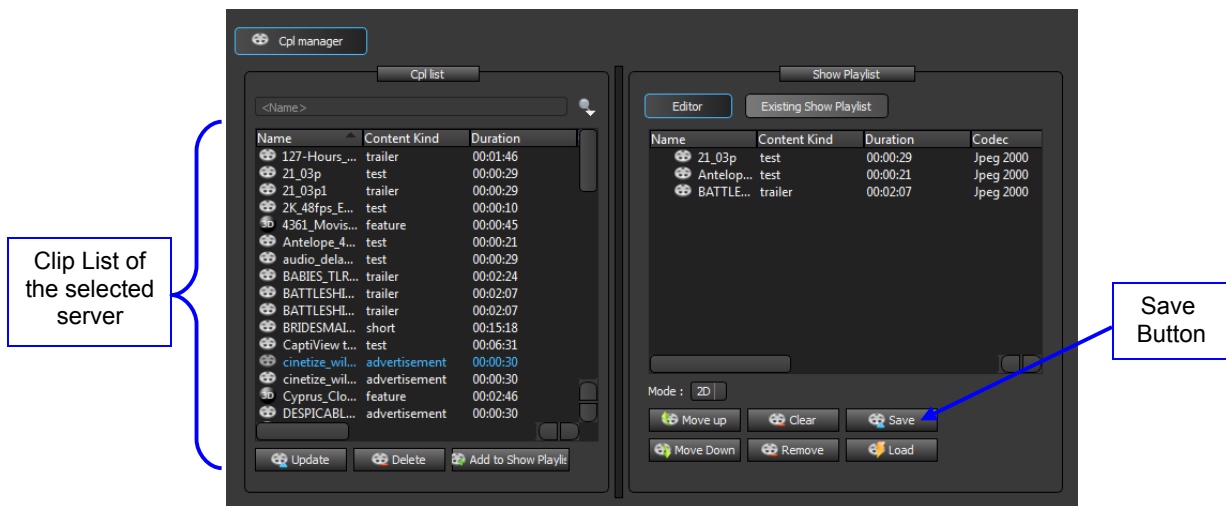


Figure 17: “CPL Manager – Clip List and Playlist Editor”

3.1.1.5 KDM Manager

The KDM manager is used to delete, upload or download KDMs from Doremi Servers connected to CineAsset.

- To manage KDMs on a connected Doremi server, select the server in the Device tab and press the Kdm manager tab (Figure 18).

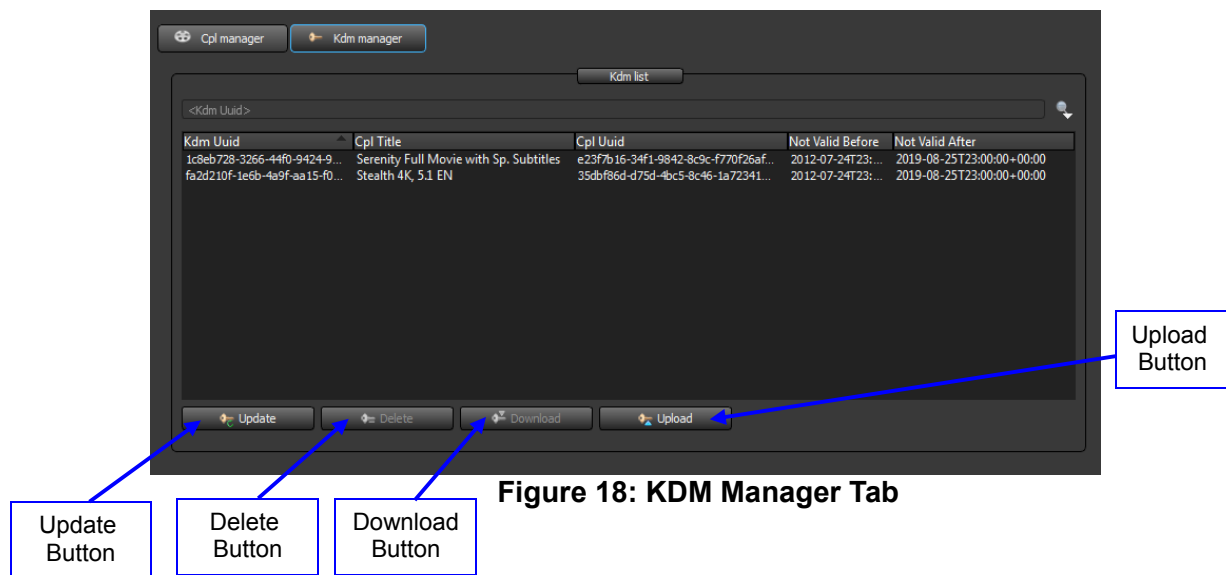


Figure 18: KDM Manager Tab

- To delete a KDM from the server, select the KDM and press the Delete button (Figure 18).
- To download a KDM for the server to your computer, select the KDM and press the Download button (Figure 18). Then select a destination and press “Select Folder.”
- To Upload a KDM from your computer to the server, press the “Upload” button (Figure 18). Select the KDM and press Open.
- After uploading a KDM to the server, press the “Update” button to refresh the KDM list (Figure 18).

3.1.2 Database Tab

The Database tab shows a list of all the DCPs in the CineAsset database accompanied by their properties (e.g., Codec, Duration, Resolution and frame rate). The database tab can be used to transfer a DCP from the CineAsset database to a server connected to CineAsset over the network. The database tab is also used to create KDMs for encrypted DCPs and to manage the assets in the CineAsset database.

- To delete a DCP from the CineAsset database and from the computer, select the DCP in the database tab and press the Remove button (Figure 20).
- To export a DCP from the CineAsset database, select the DCP in the database tab and press the Export button (Figure 19 and Figure 20).

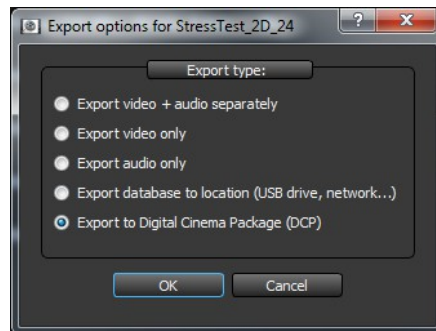


Figure 19: Export Window

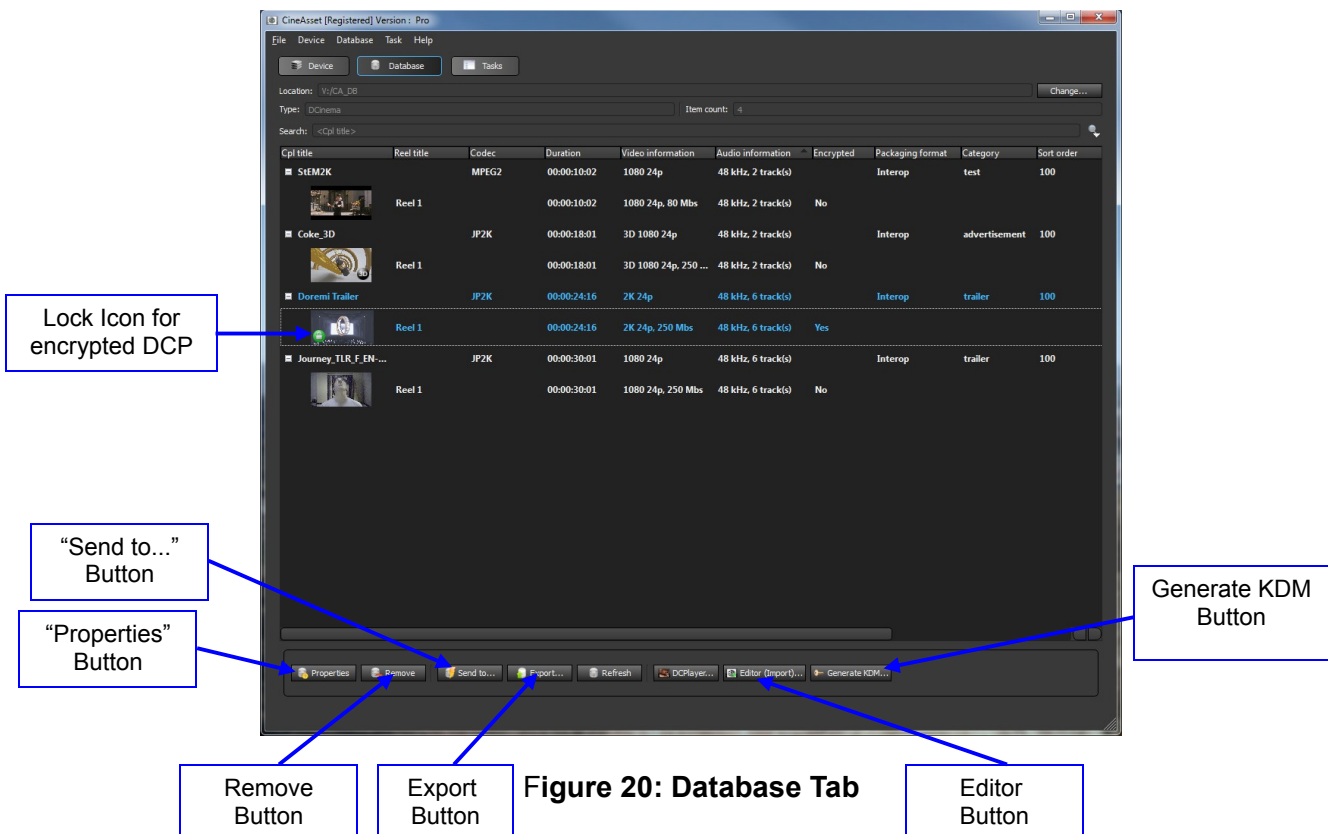


Figure 20: Database Tab

- To view the properties of a DCP in the CineAsset database:
 1. Select the DCP and press the “Properties” button (Figure 20). The properties window will appear showing the properties of the DCP and allow some parameters to be

changed (Figure 21).

2. Press the Reel # tab to view the properties of the specific reels (Figure 21).
3. Press the “Location...” button to open an explorer window with the DCP files (Figure 21).
4. Press the “CinePlayer...” button to open the selected DCP with CinePlayer (Figure 21). CinePlayer is explained in Section 3.3 of the manual.

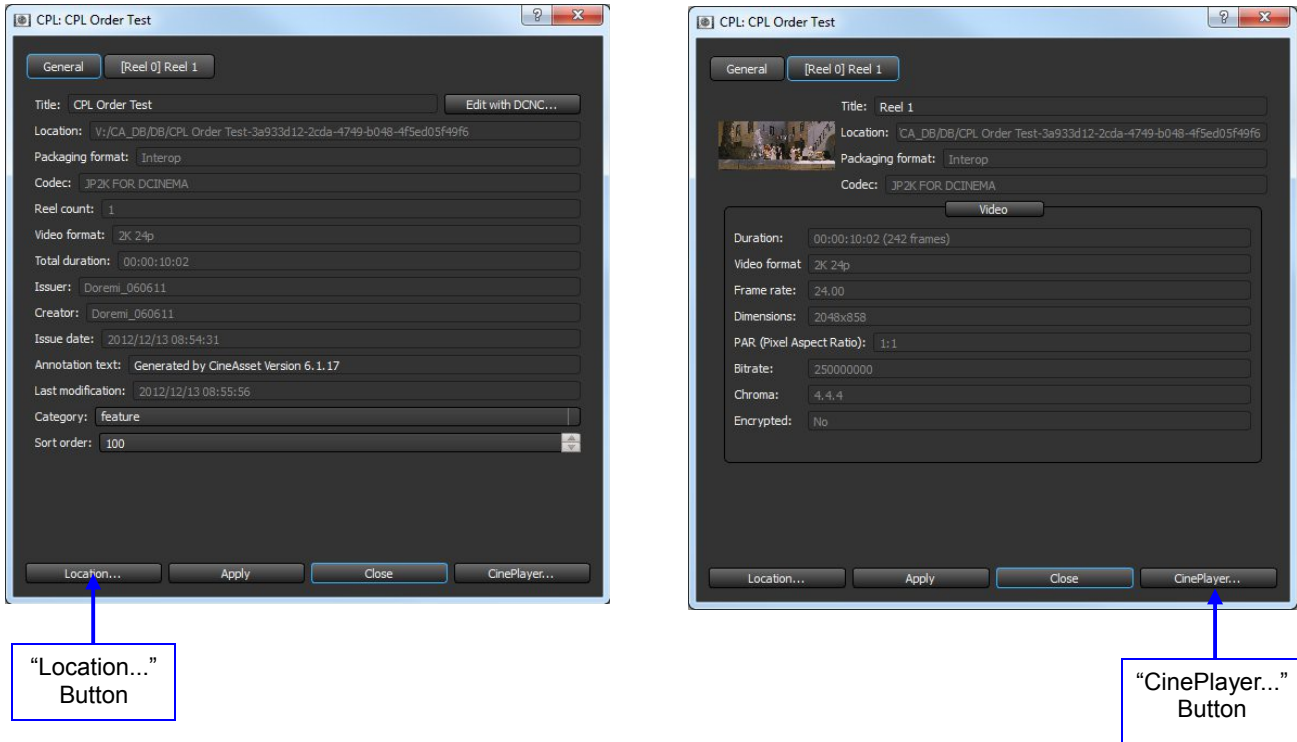


Figure 21: DCP Properties Window

3.1.2.1 Transferring to a Device

DCPs in the CineAsset database can be transferred to networked devices by selecting the DCPs in the Database tab and pressing the “Send to...” button (Figure 20).

There are two ways to transfer DCPs from the CineAsset database to networked servers, either by choosing an FTP location or by selecting a destination device.

3.1.2.1.1 Selecting a Destination Device

To transfer a DCP to a device using CineAsset Transfer:

1. Select the DCP to transfer in the Database tab and press the “Send to...” button (Figure 20).
2. Select the CPL in the left side of “Select destination device(s)” window (Figure 22).
3. If the content is encrypted, pressing the “Add KDM” button will allow you to select a KDM to send to the device along with the CPL (Figure 22).
4. Select the server to send the CPL to in the right side of the “Select destination device(s)” window (Figure 22).
5. Press “Ok” and the CPL will be transferred to the the device. The status of the transfer can be observed under the Tasks tab (Figure 22).
6. The transfer can also be scheduled for a later time using the “Schedule transfer” Check box and Date/Time drop-down menu (Figure 22).

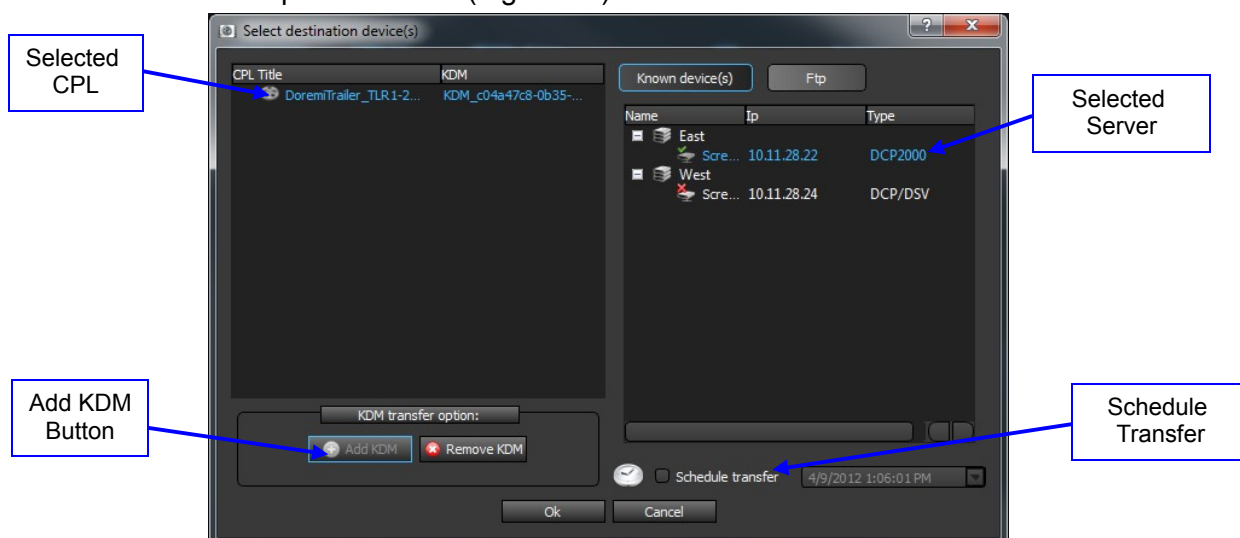


Figure 22: Select Destination Devices Window

3.1.2.1.2 Choosing an FTP Location

To transfer a DCP over FTP:

1. Select the DCP to transfer in the Database window and press the “Send to...” button (Figure 20).
2. Select the DCP in the left side of “Select destination device(s)” window (Figure 22).
3. If the content is encrypted, pressing the “Add KDM” button will allow you to select a KDM to send to the device along with the DCP (Figure 22).
4. Click the “Ftp” tab at the top of the Select destination devices window (Figure 23).
5. Enter the Address, Login, and password for the FTP site.
6. Enter the destination directory on the FTP server to place the DCP.
7. Press “Ok” to transfer the DCP to the FTP server.

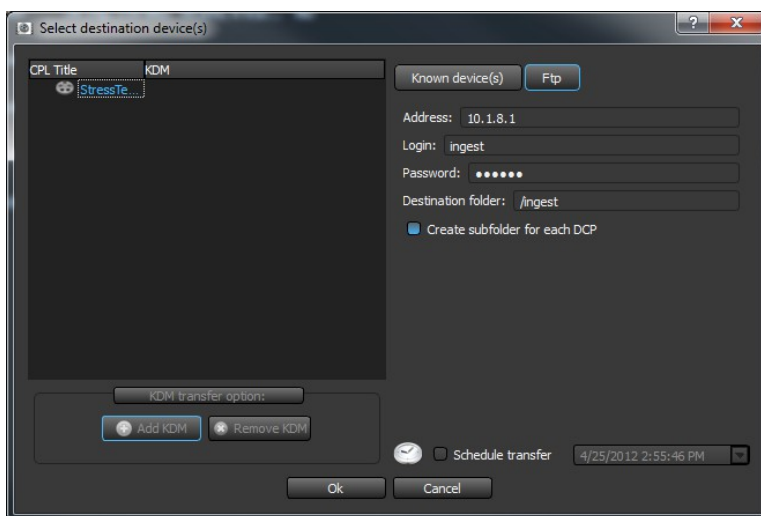


Figure 23: FTP Transfer

3.1.2.1.3 Generating KDMs

CineAsset 6.x.x now has the ability to Generate KDMs for content that has been encrypted by CineAsset (encrypting content will be covered in Section 3.2.1.3.1). This section describes how to generate a KDM for an encrypted DCP in the CineAsset database.

- DCPs that are encrypted are shown with a green lock icon in the Database tab (Figure 20).
- To generate a KDM for an encrypted DCP:
 1. Select the DCP in the Database tab and press the “Generate KDM...” button (Figure 20), and the KDM Generate Options window will appear (Figure 24).

Note: The Generate KDM button will only be active when an encrypted DCP is selected. Otherwise, the button will be grayed out.

2. Select the start and end date for the KDM using the “Start of Validity” and “End of Validity” drop-down boxes (Figure 24).
3. Select the appropriate time zone using the “Time Zone” drop-down box.
4. Choose the package standard using the “Standard” drop-down box.

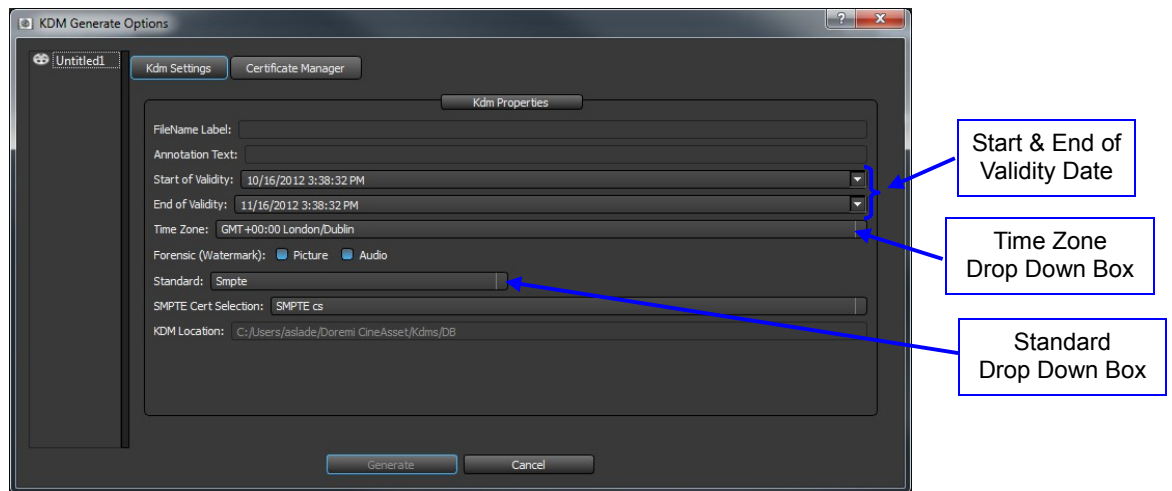


Figure 24: KDM Generate Options Settings Tab

5. Go to the Certificate Manager tab of the KDM Generate Options window and select "Add Servers" to add a server's certificate to the list (Figure 25).
6. Browse to and select the appropriate certificate .pem file. After pressing Open, the server will appear in the Servers list.
7. Click the check-box to select the newly added server (Figure 25).
8. Press the Generate button to generate the KDM for that server (Figure 25).
9. The KDM will be generated and will be accessible in the KDM Manager.

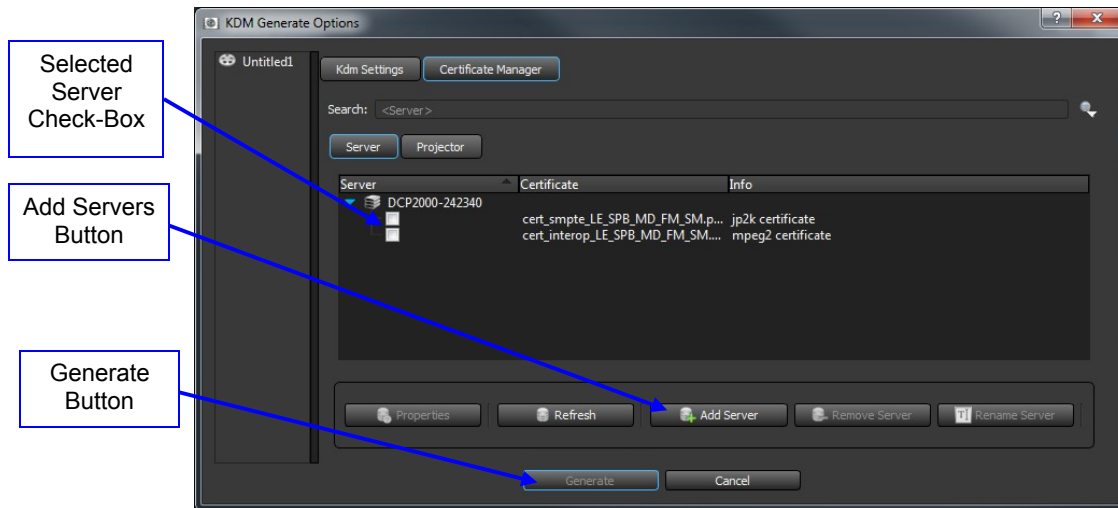


Figure 25: KDM Generate Options: Servers Tab

3.1.3 Tasks Tab

The Tasks tab displays the status of any tasks executed by CineAsset, such as transferring a DCP to a device or creating a DCP. The progress of the task is shown as well as the log information.

The color of the task circle indicates the state of the task:

- Green Circle – Task completed successfully
- Amber Circle – Task is processing
- Blue Circle – Task is pending
- Red Circle – Task has failed
- Red X through white circle – Task was canceled

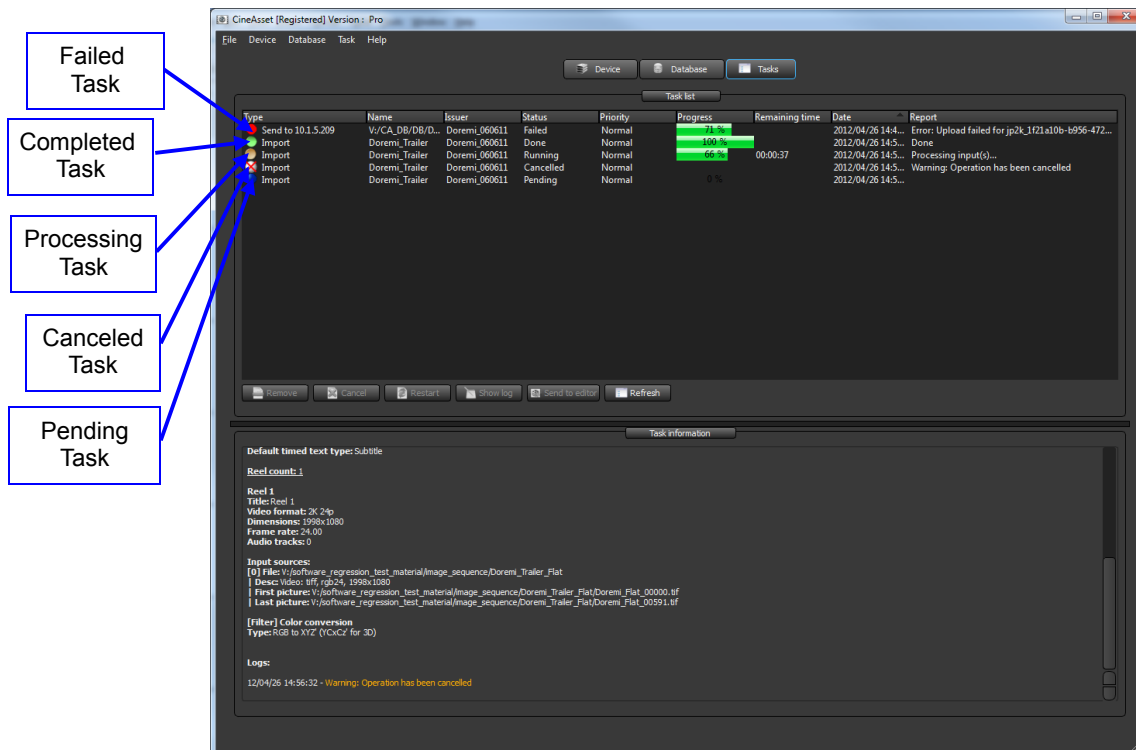


Figure 26: Tasks Tab

- To view the log file for a specific task, select the task and press the Show Log button.
- To Cancel a pending or running task, select the task and press the Cancel button.
- To restart a task, select the task and press the Restart button.
- Pressing the “Send to editor” button will open the selected task in the Editor where it can be edited and generated again.
- To remove a task, select the task and press Remove.

3.1.4 Certificate & KDM Manager

3.1.4.1 Certificate Manager

The certificate manager allows you to add certificates to CineAsset as well as view the certificates and their associated properties. Certificates added to the certificate manager can then be accessed from the Generate KDM Options window when generating KDMs.

- To open the certificate manager, go to the kdm/Certificate Manger Menu and select “Certificate Manager...” (Figure 27).

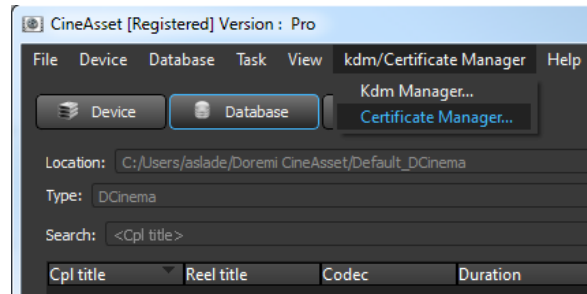


Figure 27: Opening the Certificate Manager

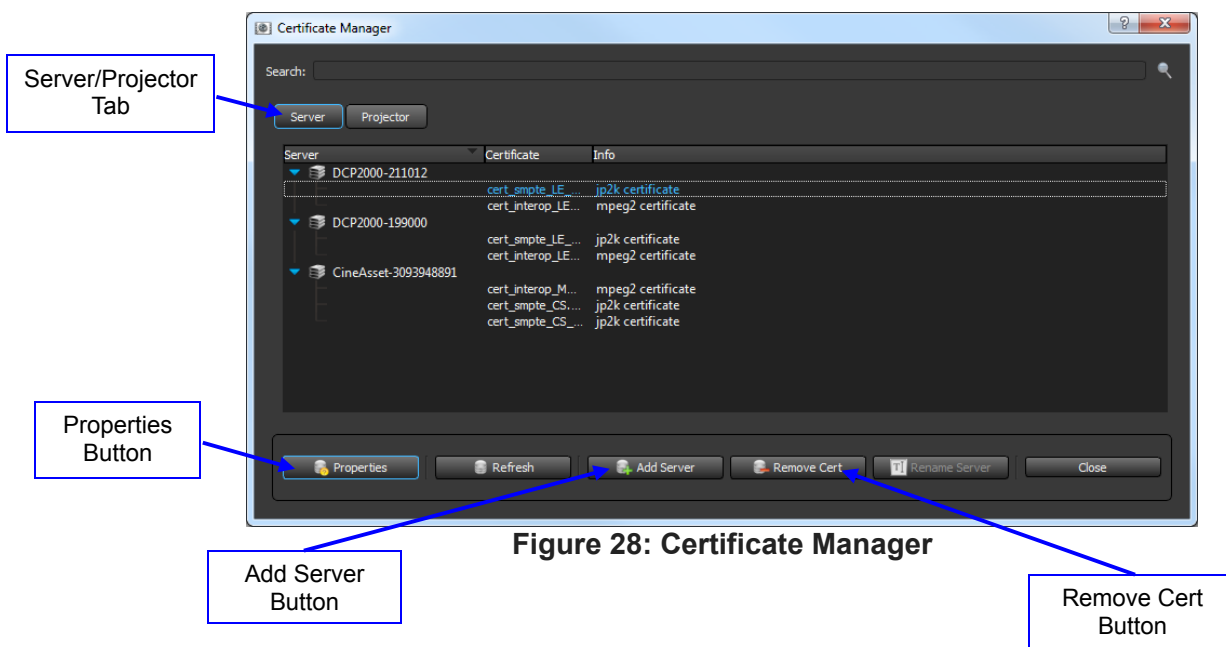


Figure 28: Certificate Manager

- The Certificate Manager has two tabs, the Server tab and the Projector tab (Figure 28). Use the server tab to manage certificates for Digital Cinema servers and the Projector tab to manage the certificates of projectors.
- To add a certificate:
 1. Press the “Add Server” button (Figure 28).
 2. Select the .pem certificate file and press open.
- To remove a Certificate:
 1. Select the certificate in the Certificate Manager.
 2. Press the “Remove Cert” button (Figure 28).
- To view the properties of a Certificate:
 1. Select the certificate in the Certificate Manager.
 2. Press the Properties button (Figure 28).
 3. The Properties window will appear (Figure 29).

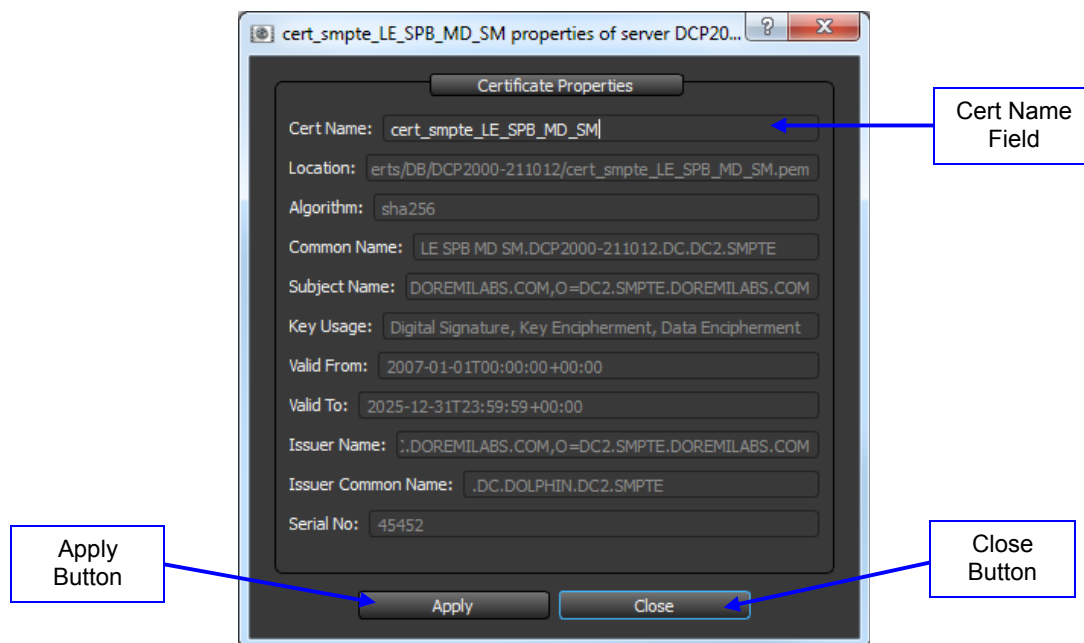


Figure 29: Certificate Manager properties window

- To rename a certificate:
 1. Open the certificate's properties window.
 2. Type a new name for the certificate in the “Cert Name” field (Figure 29).
 3. Press “Apply” (Figure 29).
 4. Press “Close” (Figure 29).

3.1.4.2 KDM Manager

The KDM manager allows you to view the KDMs generated by CineAsset as well as their associated properties. The KDM manager can also be used to send KDMs to attached servers or over the network via FTP.

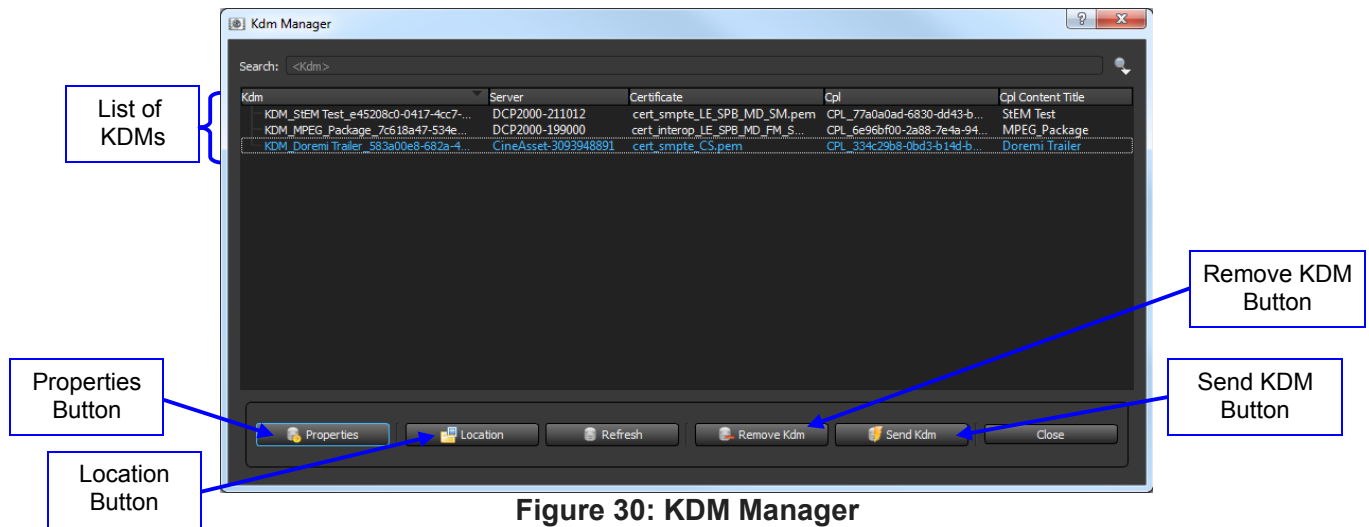


Figure 30: KDM Manager

- To open the KDM Manager, go to the “kdm/Certificate Manager” menu and select “Kdm Manager...” (Figure 31).

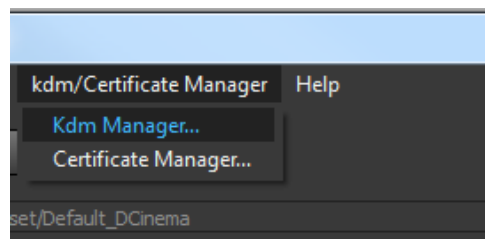


Figure 31: Opening the KDM Manager

- To view the properties of a KDM:
 - Select the KDM in the List of KDMs.
 - Press the Properties Button (Figure 30). The properties window will appear (Figure 32).

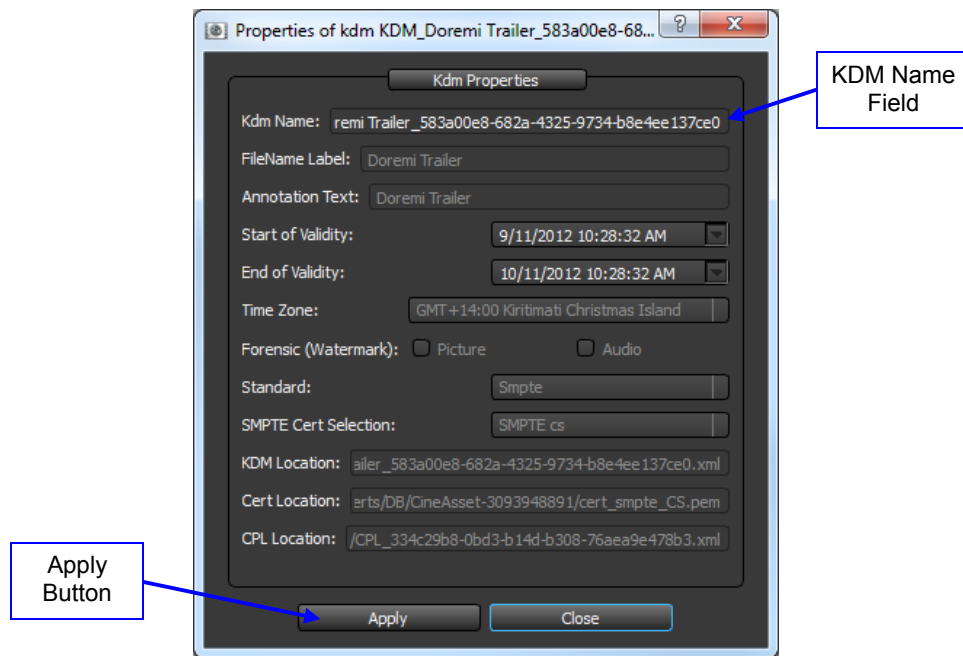


Figure 32: KDM Properties Window

- The properties window can be used to view the properties of the KDM and also to change the name of the KDM.
- To change the KDMs name:
 1. Type a new name for the KDM in the “KDM Name” field (Figure 32).
 2. Press the “Apply” button (Figure 32).
- To remove a KDM, select the KDM in the List of KDMs and press the “Remove kdm” button (Figure 30).
- To send a KDM to an attached device or over the network via FTP, select the KDM in the List of KDMs and press the “Send kdm” button (Figure 30). This will launch the “Select Destination devices” window. Then follow the steps in Section 3.1.2.1.1 or Section 3.1.2.1.2 to send the KDM to the desired location.

3.2 CineAsset Editor

The CineAsset Editor is used to create DCPs. The DCP creating process is done in three stages. First, define the settings for the DCP using the settings window. Second, create the composition using the CineAsset Editor interface. And third, press the Generate button handing the encoding back to CineAsset schedule and monitor the progress using CineAsset GUI.

The Editor can be launched in one of three ways:

1. In the start menu, click on “CineAsset Editor” under the Doremi Labs CineAsset folder.
2. With CineAsset Schedule running, right-click on the task bar icon and select “Start Editor” (Figure 33).
3. Click on “Editor (Import)...” on the Database tab of the CineAsset GUI (see Figure 36).

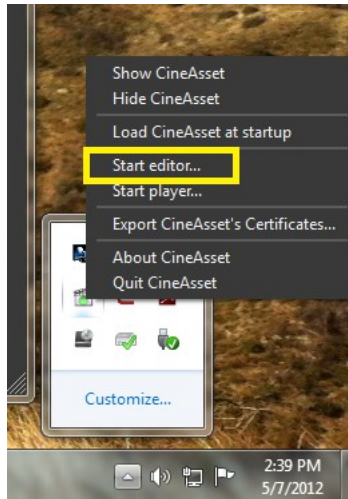


Figure 33: Launch Editor from the Task Bar

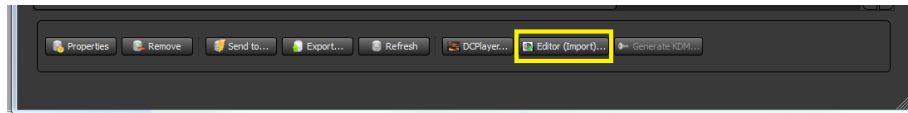


Figure 34: Launch Editor from the CineAsset GUI

- After launching the CineAsset Editor, the Settings window will appear. The Settings window is used to define the settings for the DCP, such as the bitrate, package standard and frame rate.

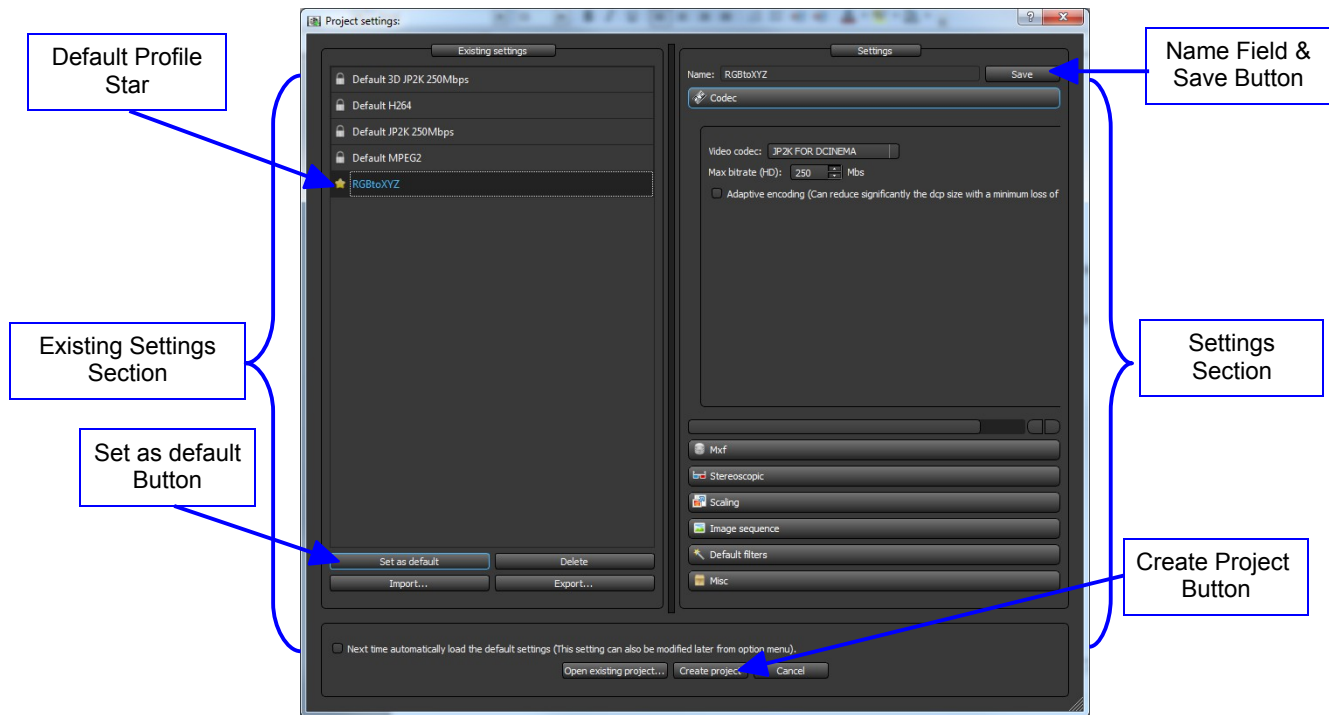


Figure 35: Project Settings Window

3.2.1 Settings Window

The Project settings window is made up of two sections: Existing Settings and Settings (Figure 35).

3.2.1.1 Existing Settings

The Existing Settings section contains saved “profiles” or settings configurations. The profiles can be set as default, so every time the Editor is launched, the default settings configuration is automatically loaded.

To set a profile as default (Figure 35):

1. Select the profile in the Existing Settings section.
2. Press the “Set as default” button.
3. The default profile will be indicated by a star icon.

To save the current settings configuration to a profile (Figure 35):

1. Type a name for the profile in the Name field at the top of the Settings section.
2. Press the Save button.
3. The new profile will appear in the “Existing Settings” section.

3.2.1.2 Settings Section

The Settings section is used to define the specific settings for the DCP. The settings section consists of 7 tabs: Codec, Mxf, Stereoscopic, Scaling, Image Sequence, Default Filters and Misc (Figure 35). Any settings that are set initially using the Settings window can be changed later from the CineAsset Editor interface.

3.2.1.3 Codec Tab

The Codec tab is used to set the video compression type and settings used such as bitrate.

- The available compression types are JPEG2000, MPEG2 and H264.

Note: CineAsset does not include a H264 encoder. To use the H264 codec, the source file must also be H264.

- For JPEG2000, the maximum bitrate is 250Mb/s for frame rates at and below 30. For frame rates above 30, 500Mb/s is the maximum bitrate.
- For MPEG2, encoding the maximum bitrate is 80Mb/s.

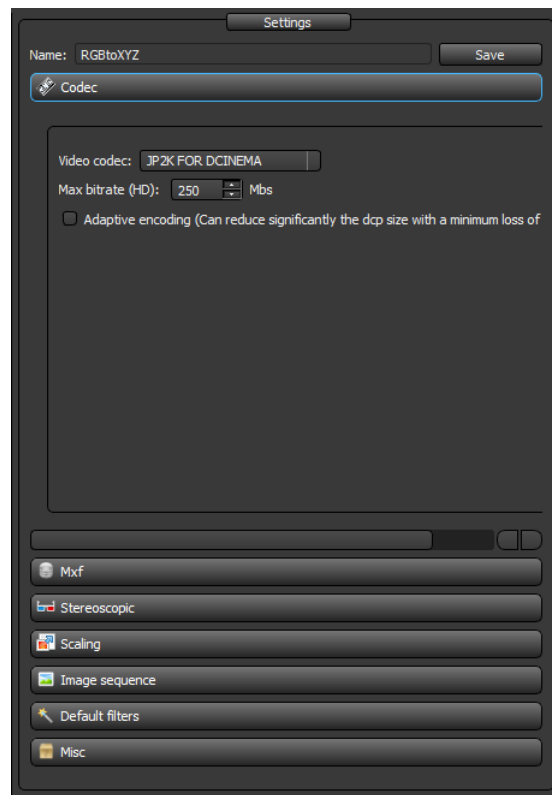


Figure 36: Codec Tab - JPEG2000

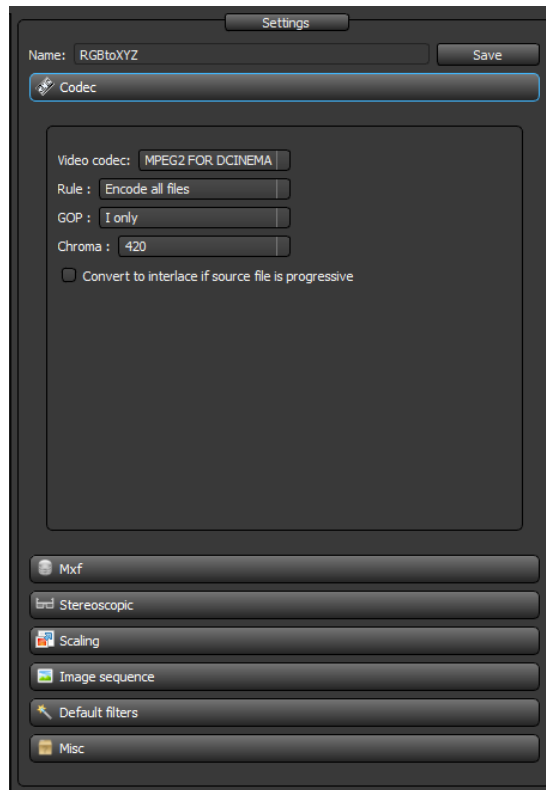


Figure 37: Codec Tab – MPEG2

3.2.1.3.1 Mxf Tab

The Mxf tab is used to set the package Standard, audio configuration, and encryption.

- To encrypt the DCP, click the “Encrypt content” check-box (Figure 38).
- The package standard can be set to either SMPTE or Interop.
- The package category can be set using the “Category” drop-down box. The available selections are Feature, Test, Trailer, Teaser, Rating, Advertisement, Short, Transitional, PSA, and Policy.
- The Audio configuration down-box is used to set the audio track assignments for the DCP. Hovering over the configuration will show the audio track labels.

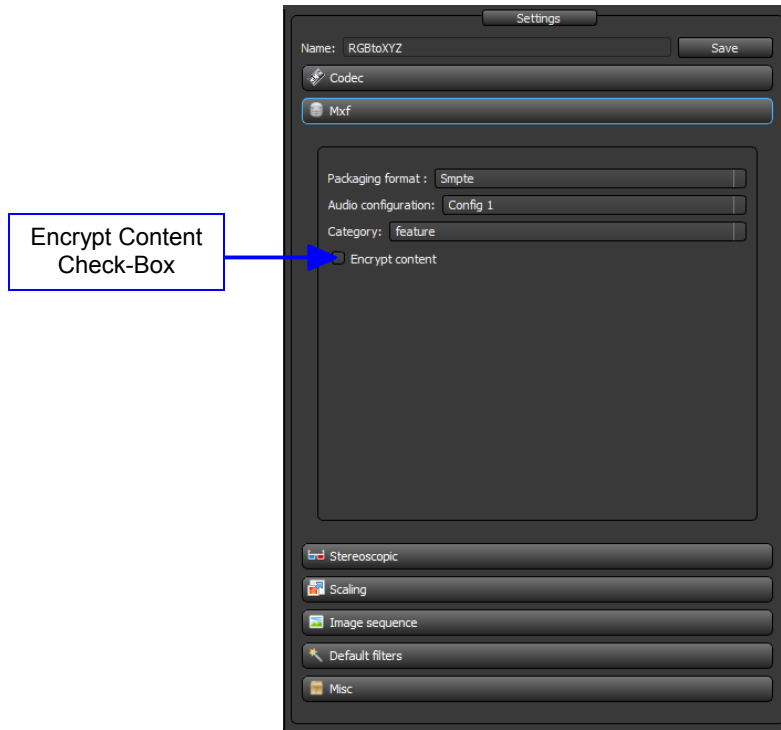


Figure 38: Mxf Tab

3.2.1.3.2 Stereoscopic Tab

To generate 3D DCPs, use the Stereoscopic tab and check the “Generate stereoscopic content” check-box.

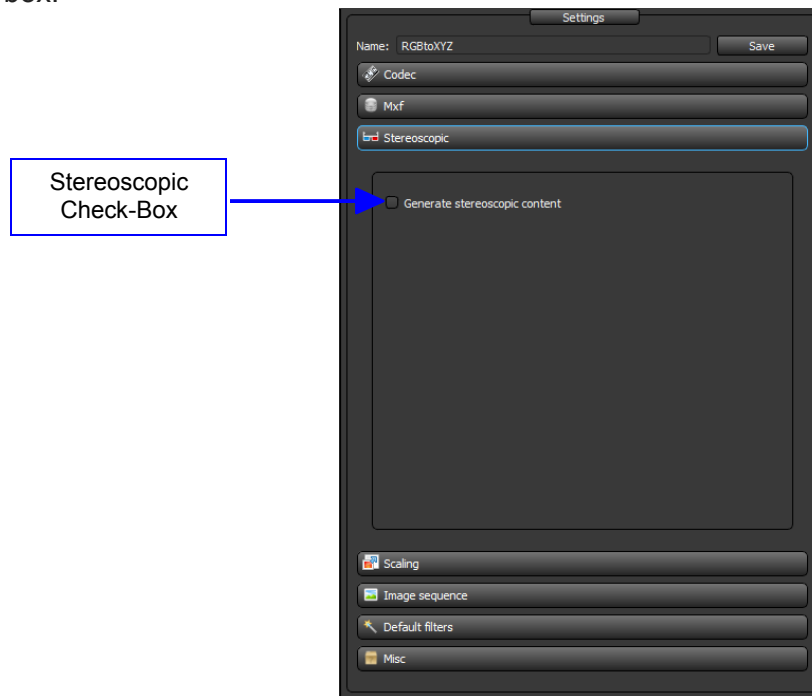


Figure 39: Stereoscopic Tab

3.2.1.3.3 Scaling Tab

The Scaling tab is used to set the scaling parameters for the composition.

- The available scaling modes are Aspect (scale and maintain the aspect ratio), Fit Horizontally, Fit Vertically, and Fill & Canvas (adds a border around the image).
- The force Resolution drop-down box is used to force the video into a specific video format.
- The scaling can also be adjusted later using the Editor interface.

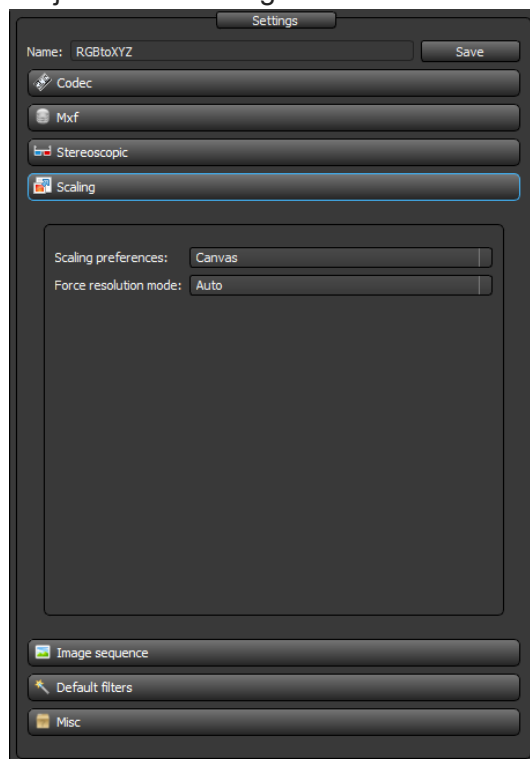


Figure 40: Scaling Tab

3.2.1.3.4 Image Sequence Tab

The Image Sequence tab is used to set the frame rate that will be applied when adding Image Sequences to the timeline.

- CineAsset supports High Frame Rates as well as standard frame rates. The available settings are 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60, 72 and 96.

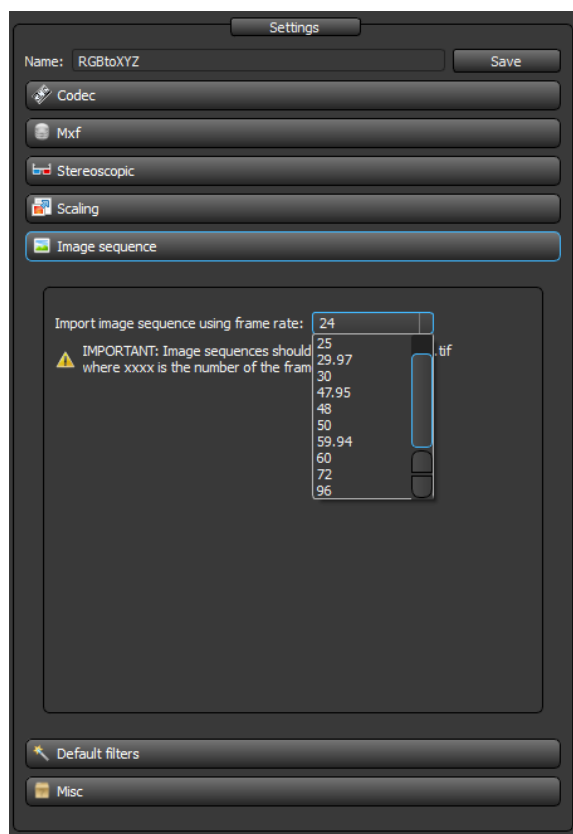


Figure 41: Image Sequence Tab

3.2.1.3.5 Default Filters Tab

The Default Filters tab can be used to apply filters to the composition when creating the project. Filters can also be added to the composition using the Editor Interface.

- The available filters that can be set as default are Color Conversion, Overlay, Burn and Lead/Trail.

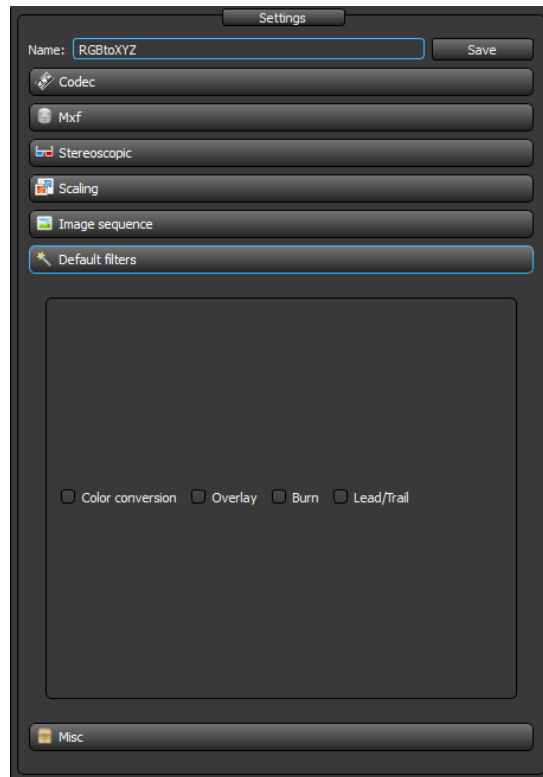


Figure 42: Default Filters Tab

3.2.1.4 Color Conversion

The color conversion tab is the most commonly used filter and often should be set as default when using JPEG2000 Image compression.

- To enable color conversion, check the Color conversion check-box in the Default filters tab (Figure 42).
- Once color conversion is checked, there are 3 options (Figure 43).
 1. Use default LUT – use the CineAsset default RGB to XYZ' LUT.
 2. Use Custom input LUT - This option will allow the color conversion to be edited manually using slides to adjust the gamma curves or by using a .csv LUT file.

Note: Custom LUT files accepted must be 12 or 16 bits with size equal to 512, 1024, 2048, 4096, 8192, 16394, 32768, or 65536.

3. Use 3D LUT – this option will allow the use of a .3dl LUT file.

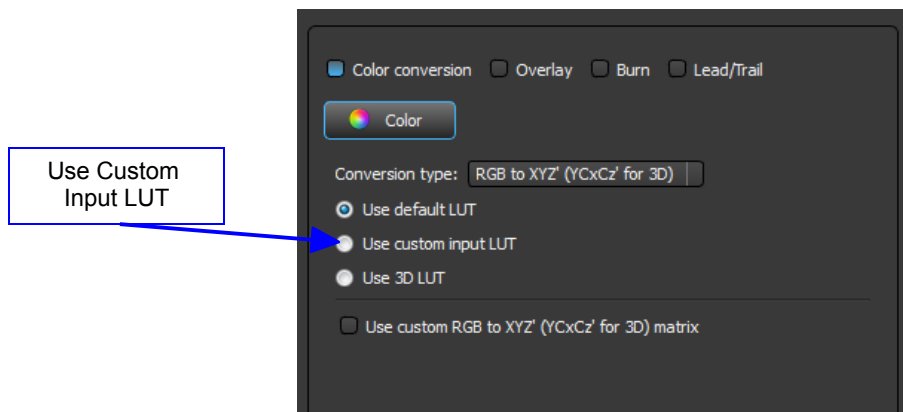


Figure 43: Color Conversion Filter Options

- To load a custom LUT .csv file:
 1. Click the “Use custom input LUT” radio button (Figure 43).
 2. Scroll down below the graph and click the “Use LUT file” radio button (Figure 44).
 3. Use the drop-down box to select either 16bits or 12 bits LUT (Figure 44).
 4. Click the folder button to browse for and select the custom LUT .csv file (Figure 44).

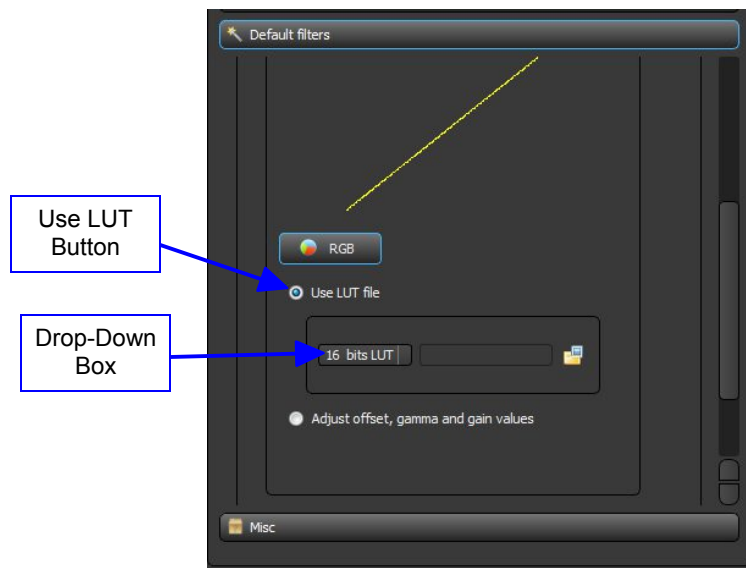


Figure 44: Using a LUT File

3.2.1.4.1 Overlay

The Overlay filter is used to overlay a png image file on the video. This feature is useful for overlaying a company logo during the playback of the DCP. Only PNG image files can be used with the overlay filter.

- To enable the logo overlay filter, check the “Overlay” check-box in the default filters tab.
- To add an Overlay image:
 1. Click the picture icon to browse and select the PNG image file.
 2. If necessary, use the Width and Height settings to change the size of the image.
 3. Use the “Top pos X” and “Top pos Y” settings to adjust where the overlay will be displayed. 0 for both will position the image in the upper-right corner.



Figure 45: Overlay Filter Settings

3.2.1.4.2 *Burn Filter*

The Burn filter will “burn” a counter with the frame number on to each frame of the DCP.

- To enable the Burn filter, check the “Burn” check-box in the default filters tab.
- The font and position of the frame numbers can be adjust using the “burn” filter settings.

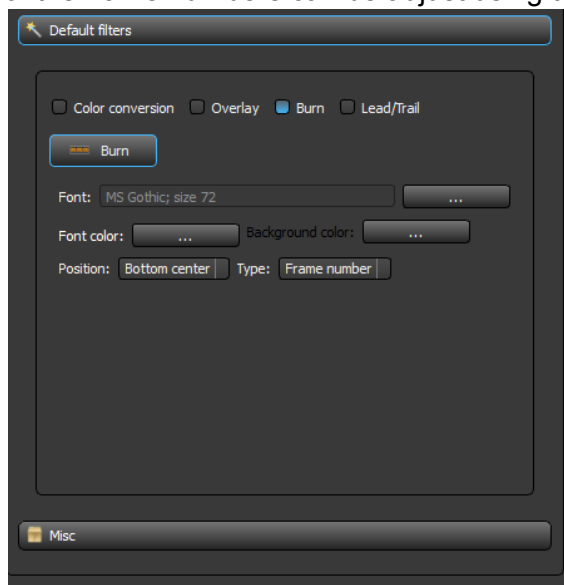


Figure 46: Burn Filter Settings

3.2.1.4.3 **Lead/Trail**

The Lead/Trail filter is used to add blank frames or custom user frames to the beginning, end, or both of the composition.

- To enable the Lead/Trail filter, check the “Lead/Trail” check-box in the default filters tab.
- Use the Mode drop-down box to choose between adding Black Frame and a custom user frame.

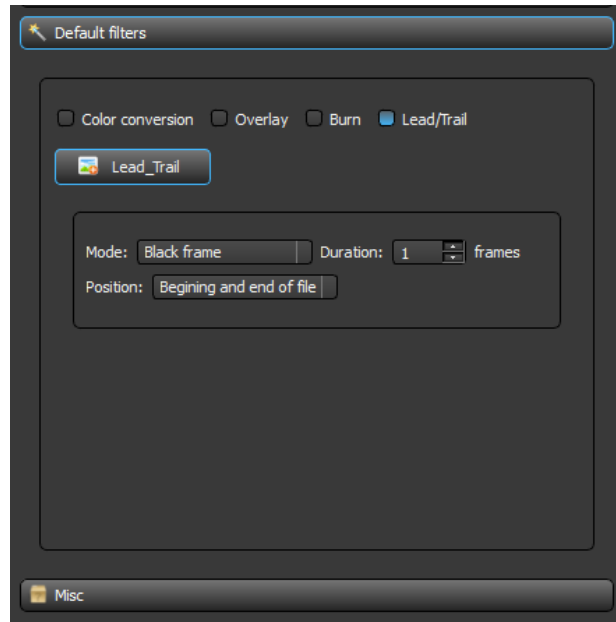


Figure 47: Lead/Trail Filter Settings

3.2.1.4.4 Misc Tab

The Misc tab has two settings.

1. Import 23.98/29.97 fps files as 24/30 fps files – with this setting 23.976 video files will be converted to 24fps and 29.97 video files will be converted to 30fps.
2. Timed Text – The timed text drop-down box is used to set whether the timed text in a composition will be Subtitles or Closed Captions.
 - Subtitles can have only one subtitle per composition
 - Captions can have up to 6 captions per composition

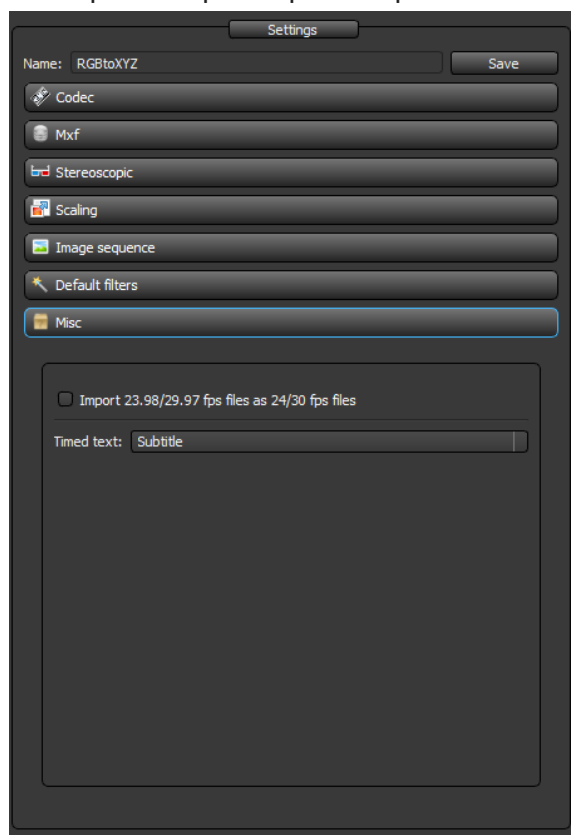


Figure 48: Misc Tab

- Once all the settings have been adjusted, press the “Create Project” button to launch the Editor interface and start creating the composition (Figure 35).

3.2.2 CineAsset Editor Interface

The CineAsset Editor interface is used to create the composition and preview the output. The Editor interface takes the familiar form of a Non Linear Editor and functions in a similar way.

- There are 4 main sections of the CineAsset Editor interface:
 1. The Browser
 2. The Timeline
 3. The Preview/Output section
 4. The General section
- The basic workflow for creating DCPs with the editor is to drag and drop audio and video files and folders from the browser onto the timeline; add filters as necessary from the browser section; preview the output with the Preview/Output section; and then press the Generate button in the General section to create the DCP.

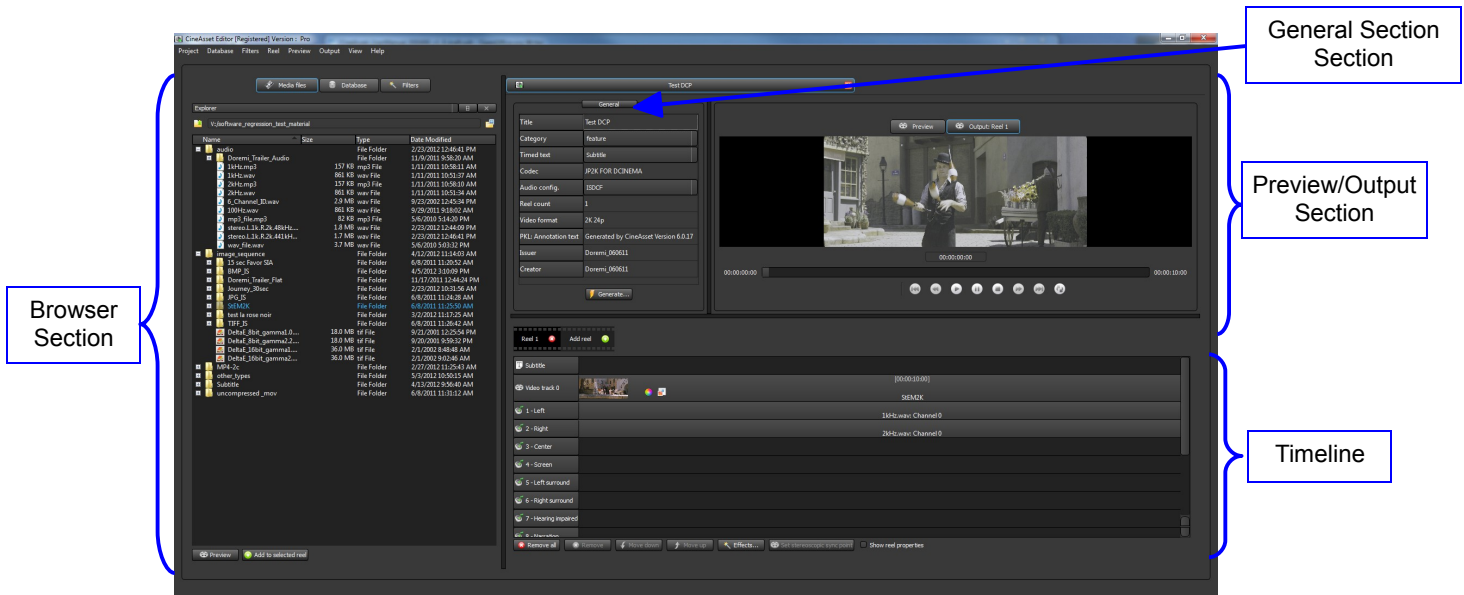


Figure 49: CineAsset Editor Interface

- There can be multiple projects open in the Editor at one time. Simply go to the Project Menu and select New to start a new project.
- There are two ways to view the open projects in the Editor: windowed mode and tabbed mode. Tabbed mode will have each open project on a separate tab.
- To enable Tabbed mode, go to the View menu and select Projects. Click Tabbed mode or press F10 (Figure 50).
- To save the current project to a .ca file that can be opened later in the Editor, go to the project menu and select Save.
- Any of the settings outlined in Section 3.2.1.2 can be changed once the Editor interface is open by going to the Project menu and selecting Settings.

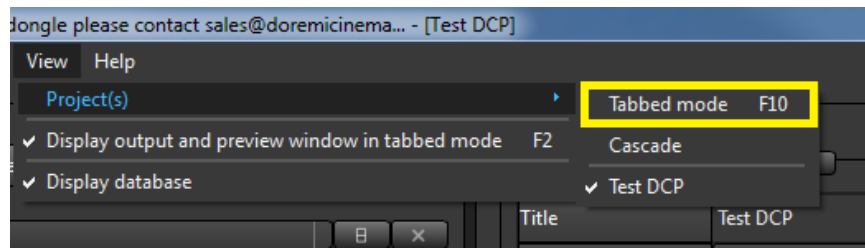


Figure 50: Tabbed Mode

3.2.2.1 The Browser Section

- Use the browser section to navigate the computer for audio and video files and drag and drop them onto the time line.
- Video files and Image sequences can be added to the timeline.
- CineAsset supports a wide range of video and audio files as well image files types. A list of the supported audio and video types can be seen in Section 6.
- DCPs from the CineAsset database can also be added to the timeline. This allows you to edit DCPs created previously.
- Clicking the Database tab at the top of the browser section will show all the DCPs in the database, and they can be added to the timeline by drag and drop (Figure 51).

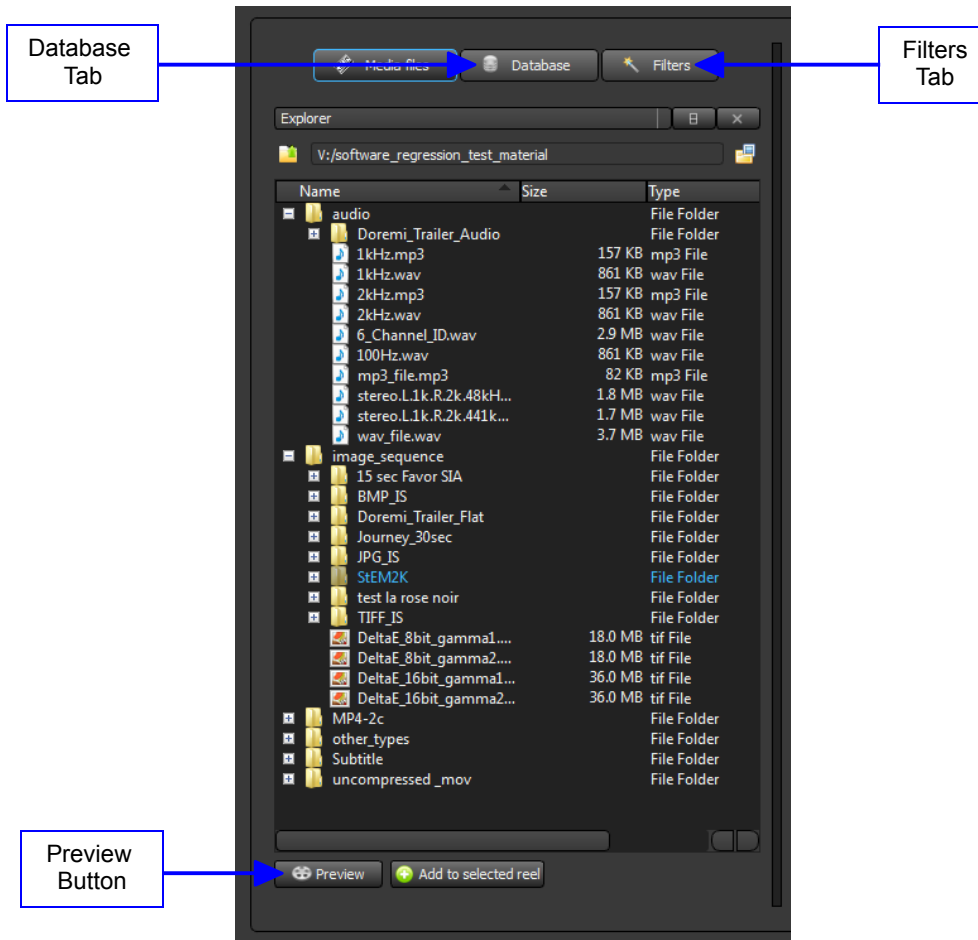


Figure 51: Browser Section

- Selecting a video file or database item and pressing the “Preview” button will load the file or DCP in the “Preview/output” section where it can be played to preview the content (Figure 51).
- Clicking the filter tab at the top of the Browser section will show a list of all the filters. These filters can be added to the current reel on the timeline by drag and drop or added to all reels by clicking the “Add to all reels” button (Figure 52).

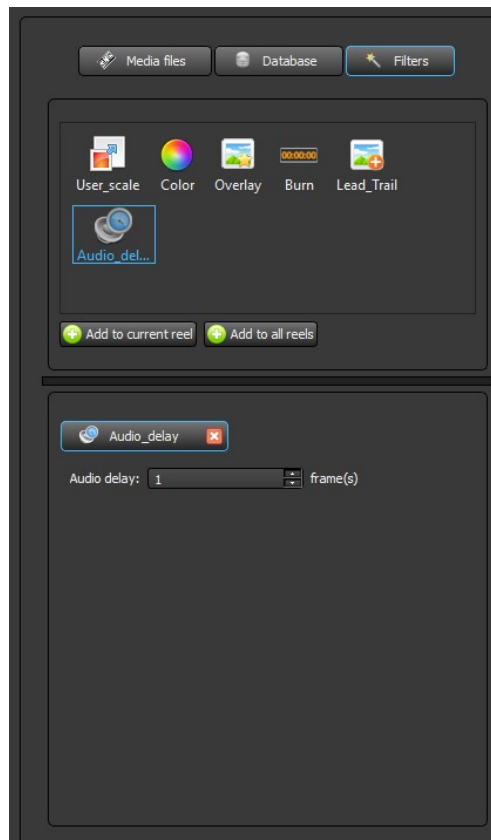


Figure 52: Browser Section – Filters Tab

- In addition to the filters, there is also an Audio Delay filter. The audio delay filter can be added to all the audio tracks and can delay the audio by frames.

3.2.2.2 The Timeline

The timeline is where the composition is constructed; files are added to the timeline from the browser.

- The timeline shows the video and audio for the selected Reel.
- To add a reel, click the “Add reel” button.
- To navigate between reels, click the Reel tabs at the top of the timeline.

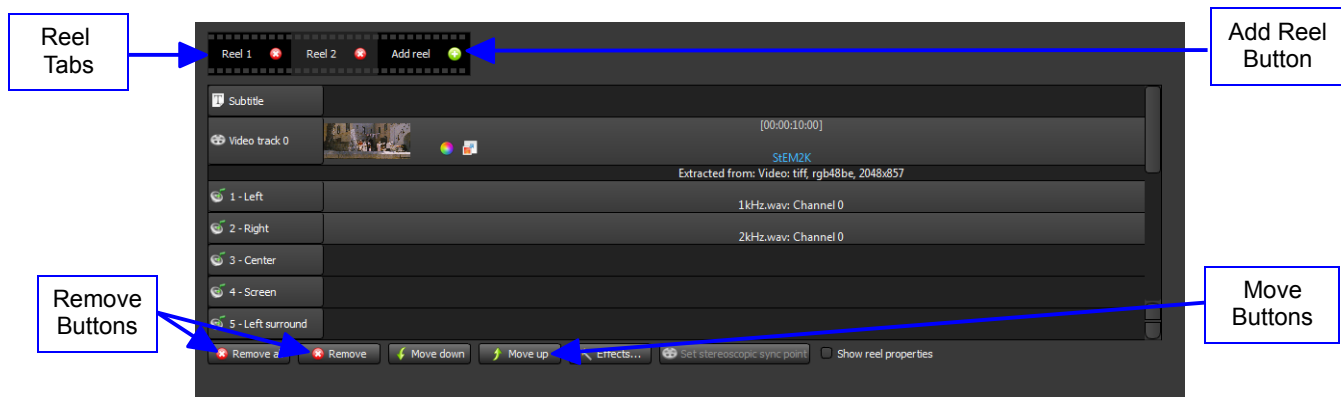


Figure 53: The Timeline

- Video files and Image Sequences can be added to the Video Tracks.
- Audio files are added to their corresponding audio tracks.
- The mouse can be used to drag it to a different track or the “Move Up” and “Move down” buttons can be used.
- Subtitle or caption xml files are added to the subtitle or caption tracks. Both text and PNG subtitles are supported.
- To remove a file from the timeline and current reel, select the track and press the “Remove” button.
- The “Remove All” button is used to clear the current Reel.

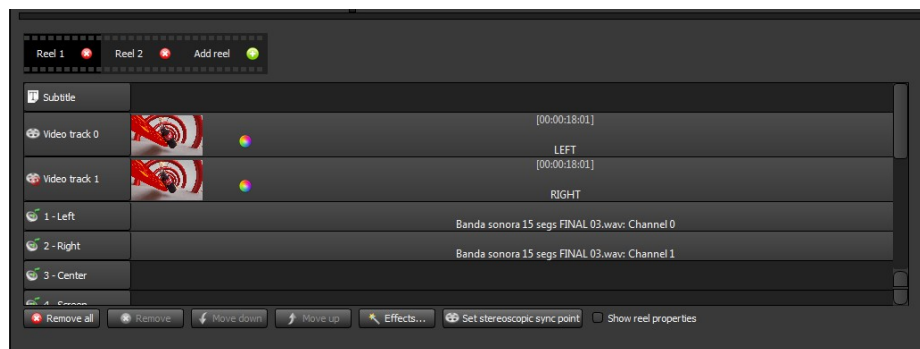


Figure 54: Stereoscopic Timeline

- When creating stereoscopic DCPs, the Timeline will have two Video tracks (Figure 54).
- The left eye file or image sequence is added to Video track 0, and the right eye file or image sequence is added to Video track 1.

3.2.2.3 The Preview/Output Section

The Preview/Output section is used to preview video files or image sequences before adding them to the timeline, or to view what the video will look like after any filters are applied.



Figure 55: Preview/Output

- To preview a file before adding it to the timeline:
 1. Select the file in the Browser and click the “Preview” button (Figure 51).
 2. Click the Preview tab in the Preview/Output section.
 3. Press Play.
- To preview the output of the Editor:
 1. Select the Output tab.
 2. Press Play.

Note: The output section will only play the current reel.

3.2.2.4 The General Section

To name the DCP:

1. Double click on the Title Text box in the General section to open the Edit Title window (Figure 56).
2. Type a name for the DCP in the text box (Figure 57).
3. The built-in Digital Cinema Naming Convention (DCNC) tool can also be used to assist with naming the DCP in compliance with DCNC version 3.8. To use the DCNC naming convention tool, click the “Edit with DCNC...” button on the Edit title window. Clicking this button will open the DCNC tool (Figure 58).
4. Type the desired title for your DCP in the Film Title field and select the desired parameters using the drop-down menus. When the title is DCNC compliant, the clip title will change colors to reflect the selected parameters. If the clip title is not DCNC compliant, then the title will be shown in black.
5. Press the Ok button when finished.

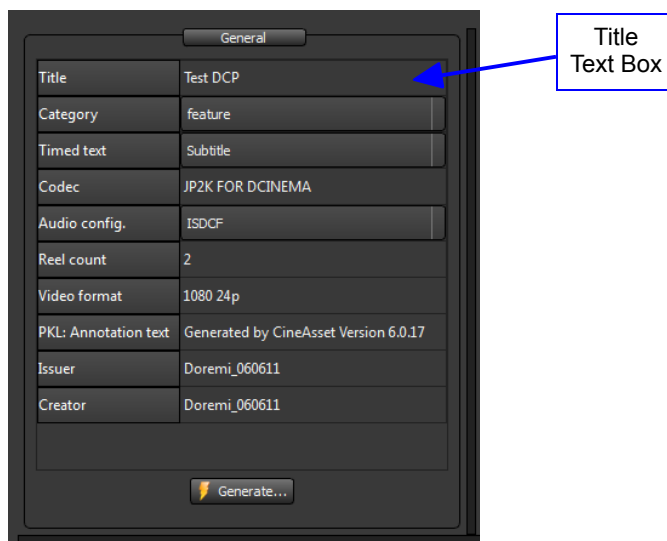


Figure 56: General Section

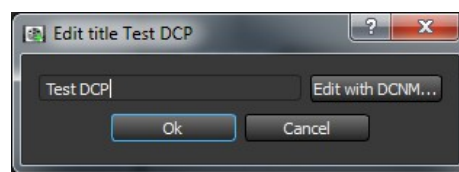


Figure 57: Edit Title Window

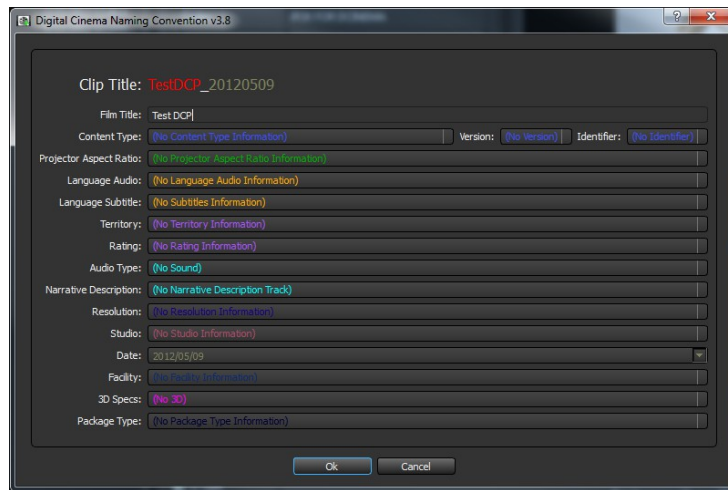


Figure 58: DCNC Naming Tool

- To change the Category of the DCP, use the Category drop-down box (Figure 56).
- To select between Subtitles and Captions, use the Timed Text drop-down box (Figure 56).
- The Audio configuration can be changed using the Audio Config. drop-down box (Figure 56).
- After all the files have been added to the timeline and the content has been verified with the Output section, press the “Generate” button in the General section to start creating the DCP (Figure 56).
- After pressing the Generate button, the CineAsset GUI will open and the status can be monitored in the task tab.

3.2.2.5 Creating Supplemental Packages

CineAsset can create supplemental packages for DCPs that are in the CineAsset Database.

To create a supplemental package

1. Start the CineAsset Editor and create a project with the same settings as the DCP you are creating a supplemental package for (e.g. codec, etc.).

Note: If the source DCP has color conversion, DO NOT add the color conversion filter to the supplemental project. Doing so will result in color conversion being applied twice.

2. In the Editor Browser section click the Database tab (Figure 59).

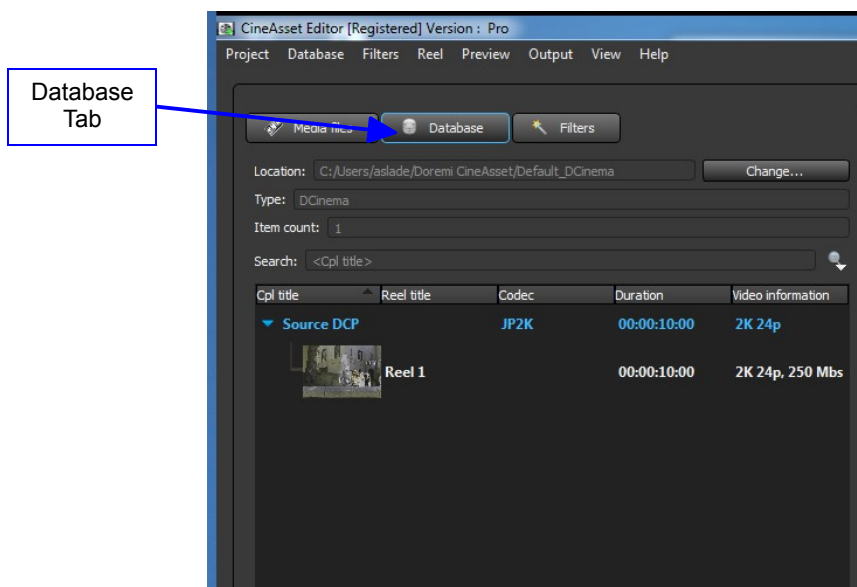


Figure 59: Browser Database Tab

3. Add the source DCP to the timeline by drag and drop.
4. Remove the assets from the timeline that you want to replace (such as audio tracks), or add assets (such as subtitles) to the timeline that you want to add to the DCP.
5. Once the supplemental package has been configured properly, press the Generate button in the General section of the Editor.
6. On the Generation window press the Okay button.
7. The Project Supplemental Package window will appear (Figure 60). Make sure any items in the window are checked and press Ok.

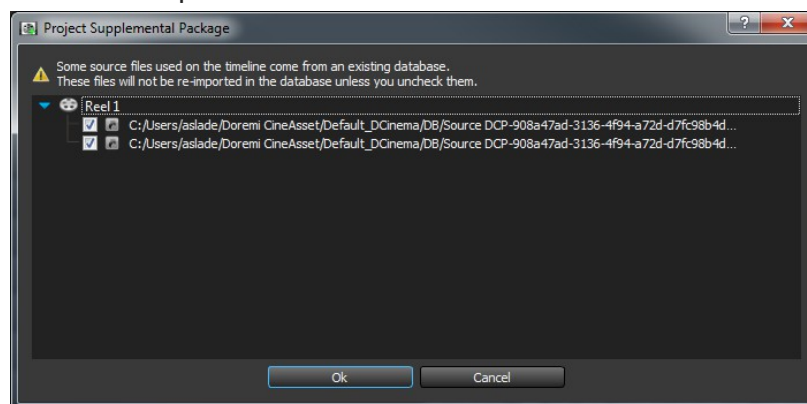


Figure 60: Project Supplemental Package Window

8. Once the package is created, it will be visible in the database with shortcut arrows, indicating it is a supplemental package (Figure 61).

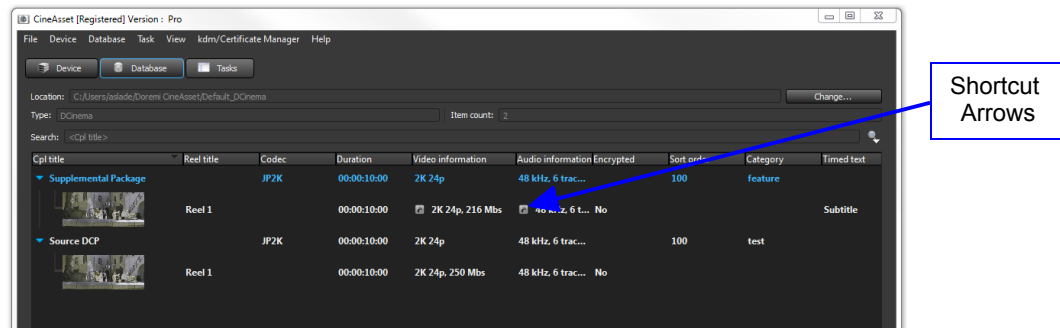


Figure 61: Supplemental Package in Database

3.3 CinePlayer

CinePlayer is a software based media player used to review Digital Cinema Packages (DCP) without the need for a digital cinema server. CinePlayer can playback any DCP, not just those created by Doremi Mastering products. Both encrypted and un-encrypted DCPs are supported. In addition to playing DCPs, CinePlayer can also playback many popular video file types. For a list of codecs and file types supported by CinePlayer, see Section 6.

- Launching CinePlayer:
 1. In the start menu, click on “CinePlayer” under the “Doremi Labs, CinePlayer” folder.

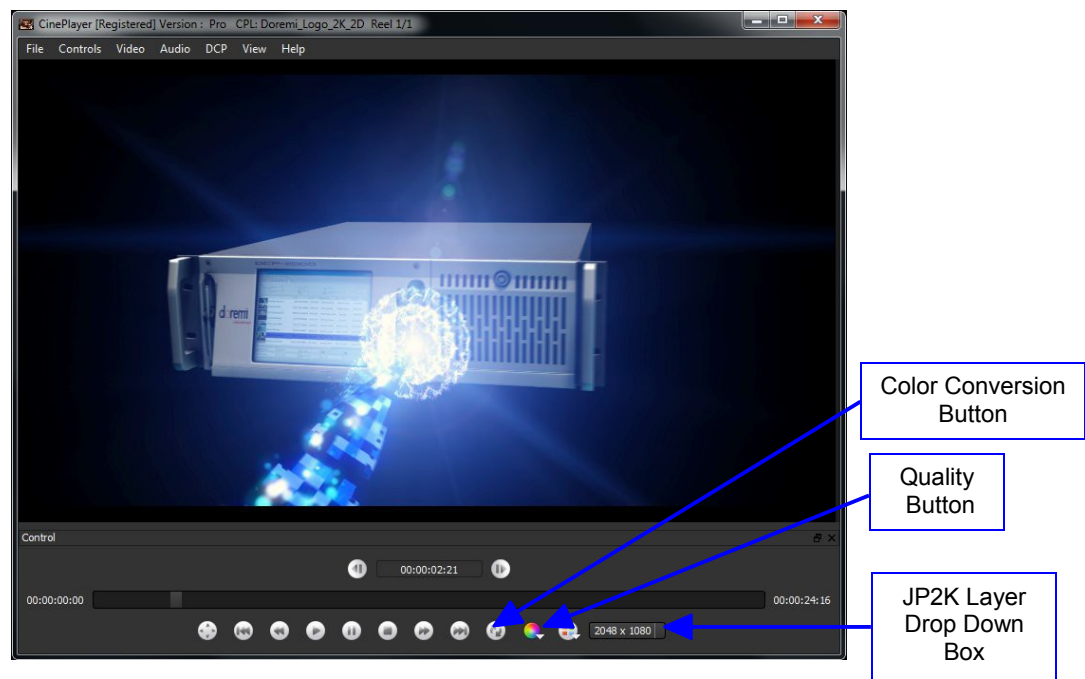


Figure 62: CinePlayer

- To open a DCP or file in CinePlayer, you can simply drag and drop a file or folder onto the player.
- In addition to drag and drop files or folders, files can be opened by:
 1. Going to the “File” menu and selecting “Open Media ...”
 2. To open a DCP in the player, click the DCP radio button.
 3. Then click the “...” button to browse for the parent folder of a DCP.
 4. Then press OK to open the DCP for playback.
 5. If the DCP is encrypted, you will be prompted to locate the KDM file.
 6. Press the “...” button to browse for the KDM file and then press Ok to load it.

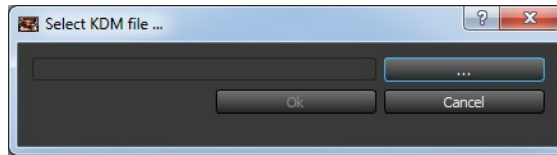


Figure 63: Select KDM Window

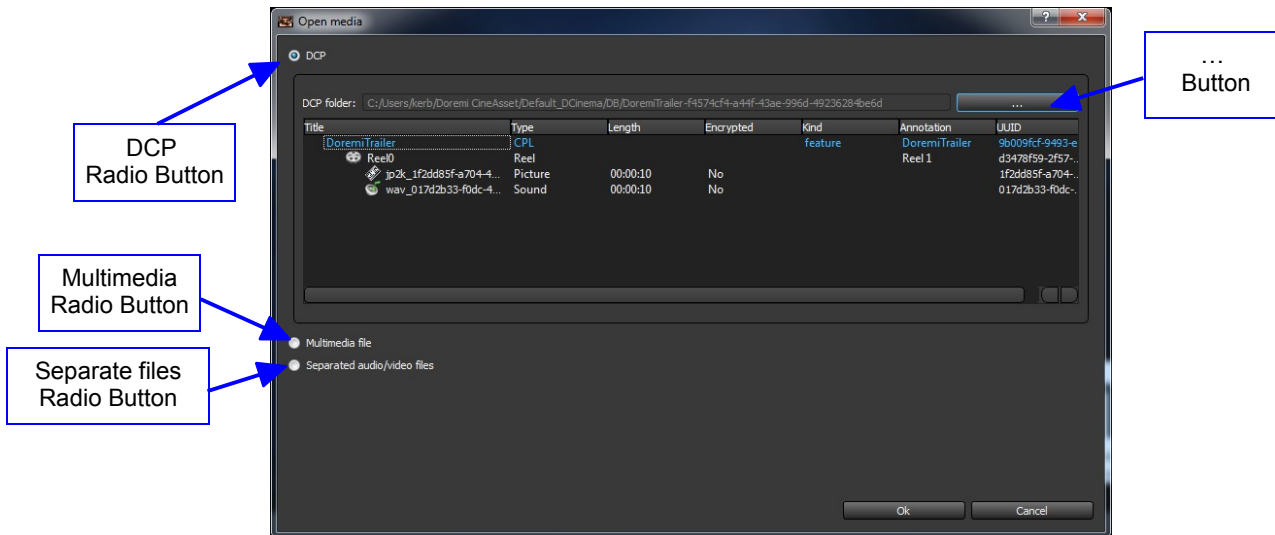


Figure 64: Open Media Window

- To open a video file for playback:
 - Click the “Multimedia file” radio button.
 - Click the “...” button to browse for a multimedia file.
 - Press the OK button to open the file for playback.
- To open individual audio and Video files for playback:
 - Click the “Separated audio/video files” radio button.
 - Click the “...” buttons to browse for audio and video files.
 - Press the OK button to open the files for playback.
- Once the DCP is open, XYZ' to RGB color conversion can be added by pressing the color conversion button and selecting “XYZ'/YCxCz to RGB” (Figure 62).
- CinePlayer supports the multiple resolution layers of JPEG2000 encoded DCPs.
- To select a different Layer, use the JP2K Layer drop down box(Figure 62).
- When playing back a 3D DCP, Side by Side mode can be initiated by (Figure 65):
 - Go to the Video menu
 - Select 3D view
 - Select Side by Side

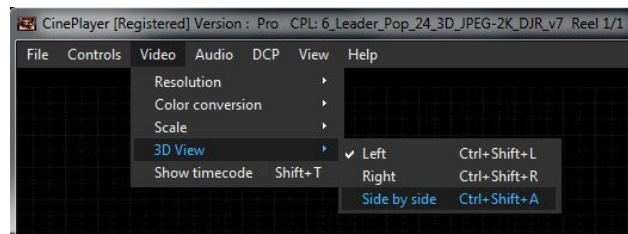


Figure 65: Side by Side 3D view

- For use with slower computers, CinePlayer includes a “Quality” setting. The “Quality” setting saves processing power by reducing the rendering quality. The “Quality” selection is from 10 (the best) to 1 (the least). The default setting is 5.
- To change the Quality setting, use the quality button (Figure 62).

3.4 CineAsset Render Nodes

CineAsset 6.2.x and later includes support for distributed rendering using render nodes. A render node is a computer running a special version of the CineAsset engine that requires no user interaction. The master computer is the workstation with the full version of CineAsset installed and protected with the hardware dongle. The master dongle contains the number of render nodes purchased by the customer and available for use. There is no protection on the render node installations. In other words, the render nodes could be installed on multiple computers on the network.

When the master CineAsset application is running, it will search for render nodes on the network. As an example, if the CineAsset dongle is licensed for five render nodes, it will use up to five render nodes it finds on the network when it is processing tasks.

3.4.1 Requirements for Using Render Nodes with CineAsset

- The CineAsset dongle must include licensing for at least one render node.
 - Additional render node licenses can be added at any time by contacting sales@doremilabs.com.
- The render nodes must be installed on the same platform as the master copy of CineAsset.
 - For example, if CineAsset is running on a Windows workstation, the render node(s) must also be installed on a computer running Windows. Likewise, if the master CineAsset workstation is running Mac OS, the render nodes must be installed on Mac workstations.
- The network infrastructure must be capable of sustaining the throughput required for distributed rendering.
 - Insufficient network bandwidth may actually slow down rendering processes.

3.4.2 Using CineAsset with Render Nodes

Since CineAsset is designed to automatically search for render nodes on the network, there is no configuration required to set up distributed rendering with CineAsset. Simply install the render nodes on workstations that share the same network as the CineAsset master workstation and start processing a job.

- For users who have content (image sequence only) stored on a fast network attached storage device (NAS), it is recommended to access the content by FTP using CineAsset Editor's FTP Explorer. Accessing data by FTP is much faster than using the default sharing mode (file explorer).
 - The file access method can be changed by clicking on the "Explorer" or "FTP Explorer" label in the upper left corner of the CineAsset Editor window and selecting the correct one to use.

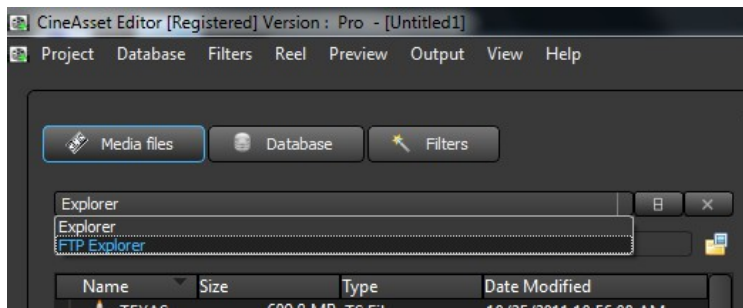


Figure 66:

- When the CineAsset render node is running, the application icon will be displayed in the task bar or menu bar.



Figure 67: Window Task Bar



Figure 68: Apple Menu Bar

- Right clicking on the icon will produce options to see the about menu or quit the application. The Windows version will also allow you to show or hide the console window.

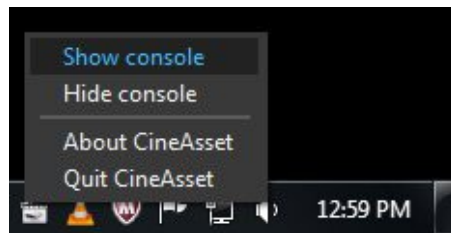


Figure 69: Windows Task Bar

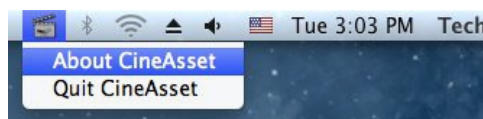


Figure 70: Apple Menu Bar

- When CineAsset is processing a job, the task information window will show the IP address(es) of the servers that are being used as render nodes.

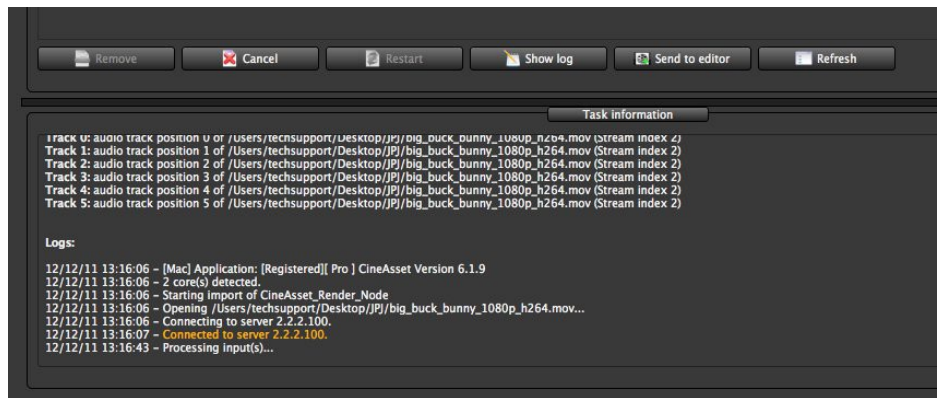


Figure 71:

- The console window on the render node workstation will also display information about the job that is being processed.

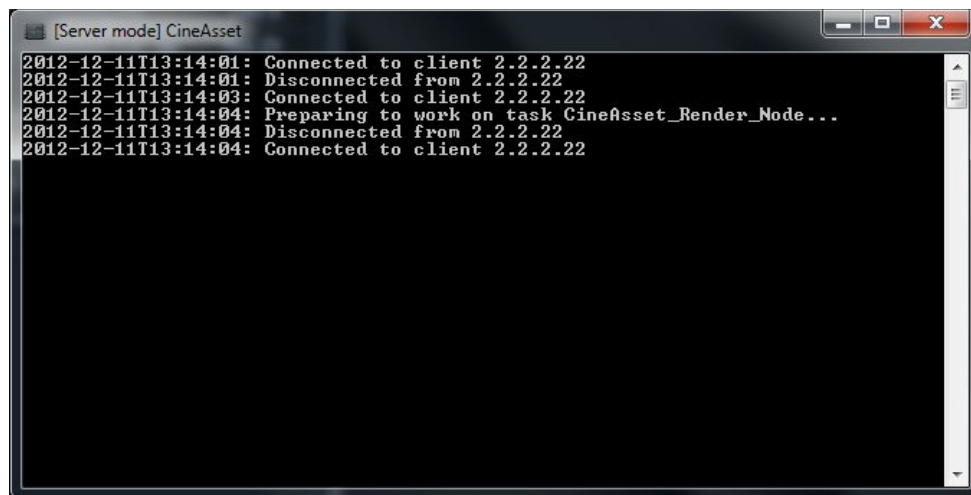


Figure 72:

4 Command Line Tools

CineAsset and CinePlayer can also be used from the command line to generate and playback DCPs. This section explains the command line syntax for CineAsset and CinePlayer.

4.1 CineAssetSchedule

The application that handles the processing of inputs and wrapping of DCPs is called CineAssetSchedule. CineAssetSchedule is located in “C:\Program Files\DoremiLabs\CineAsset”.

4.1.1 Syntax

```
CineAssetSchedule.exe <command> [-i input1 [input options] input2 [input options]...] -settings settings_file_name title [destination]
```

4.1.1.1 Command

The available commands include:

1. help: Shows the command line usage.
2. dcp: Create a dcp

4.1.1.2 Input Options

The available input options include:

1. -audio_only: Import only the audio tracks
2. -video_only: Import only the video tracks

4.1.1.3 Settings

The path to a settings file to use for creating the DCP. Settings files can be generated using CineAsst. If no settings file is specified, then the CineAsset default settings are used.

4.1.1.4 Title

The title to use for the DCP.

4.1.1.5 Destination

The path to where the DCP is to be created such as the Desktop or C Drive. If no destination is specified, the DCP will be created in the active CineAsset database.

4.1.2 Examples

1. CineAssetSchedule.exe dcp -i G:\audio.wav G:\video.m2v -settings G:\jp2k_settings.pro dcp_example1 G:\

Example 1 will create a one reel DCP using “audio.wav” and “video.m2v”. The settings specified in the jp2k_settings.pro file will be used when creating the DCP. The DCP will be named “dcp_example1” and saved to the root directory of the G drive.

2. CineAssetSchedule.exe dcp -i G:\video1.ts -settings G:\jp2k_settings.pro dcp_example2 G:\

Example 2 creates a one reel DCP from video1.ts using the settings specified in the jp2k_settings.pro file. The DCP will be named dcp_example2 and saved to the root directory of the G drive.

```
3. CineAssetSchedule.exe dcp -i G:\video1.ts -video_only G:\video2.ts  
   -audio_only -settings G:\jp2k_settings.pro dcp_example3 G:\
```

Example 3 creates a one reel DCP using the video track from video1.ts and the audio track from video2.ts. The settings specified in jp2k_settings.pro file will be used when creating the DCP, which will be named dcp_example3 and saved to the root directory of the G drive.

```
4. CineAssetSchedule.exe dcp -i G:\reel1.wav G:\reel1.m2v -i G:\reel2.wav  
   g:\reel2.m2v -settings jp2k_settings.pro dcp_example4 G:\
```

Example 4 creates a 2 reel dcp, reel one made from the reel1.wav and reel2.m2v files and reel 2 made from the reel2.wav and reel2.m2v files. The settings specified in jp2k_settings.pro file will be used when creating the DCP, which will be named dcp_example4 and saved to the root directory of the G drive.

4.2 CinePlayer

The DCPlayer can also be used from the command line. CinePlayer.exe is installed in C:\Program Files\DoremiLabs\CineAsset.

4.2.1 Syntax

```
CinePlayer.exe [input file 1] [input file 2] {-fullscreen}
```

4.2.1.1 Input files

- The maximum number of input files is two. If two input files are specified, only the audio track will be taken from “input file 1” and only the video track will be taken from “input file 2”.
- An input file can be a video or audio file of any format supported by CineAsset.
- An input file can also be a folder containing DCP files or a folder containing an Image Sequence.

4.2.1.2 Fullscreen

When the full-screen switch is present, CinePlayer will open in full-screen mode.

4.2.2 Examples

```
1. CinePlayer.exe G:\audio.wav G:\video.ts -fullscreen
```

Example 1 will open audio.wav and video.ts in for playback in CinePlayer. The application will open in full-screen mode.

```
4. CinePlayer.exe G:\Example_DCP\ -fullscreen
```

In example 4, “Example_DCP” is a folder containing DCP files. This example will open the DCP from folder “Example_DCP” for playback in full-screen mode.

5 Doremi CineExport (Mac Only)

Starting with CineAsset software version 6.2.x, an Apple Compressor plug-in has been created for Mac users. The plug-in allows users to export Final Cut Pro sequences or other common video files as digital cinema packages through Compressor. Doremi CineExport is available for Mac OS X 10.6 and above. Doremi CineExport can be installed along with the CineAsset application. For more information on using Doremi CineExport, please reference the “Doremi CineExport User Manual.” This manual can be found on the local machine under /Macintosh HD/Applications/Doremi Labs/Compressor Plugin/.

6 CineAsset Supported File Formats and Codec's

This section provides a list of file formats supported by the CineAsset application.

6.1 *Supported Codec's*

- ProRes-422
- DnxHD®
- YUV Uncompressed 8-10 bits
- DIVX®, XVID®, MPEG4 AVC/H-264
- VC-1
- MPEG1, MPEG2, Matrox MPEG2
- DVCPRO HD, DVCPRO 25/100
- Photo JPEG, MJPEG-A&B
- DV
- and many more...

6.2 *Supported Containers*

- AVI
- MOV
- MXF
- MPG
- TS
- EVO
- WMV
- M2TS
- and many more...

6.3 *Supported Image Format*

- BMP
- TIFF
- TARGA
- JPG
- DPX
- and many more...

6.4 *Supported Audio Format*

- WAV
- AAC
- AIFF
- PCM
- and many more...

7 Acronyms

Term	Definition
DCP	Digital Cinema Package
DCNC	Digital Cinema Naming Convention
FCP	Final Cut Pro
JPEG	Joint Photographic Experts Group
JP2K	JPEG2000
MPEG	Moving Pictures Experts Group
UUID	Universally Unique Identifier
WAV	Waveform Audio File Format

8 Document Revision History

Date	Version	Description
09/25/2008	1.0	First version.
01/29/2009	1.1	All sections revised.
12/15/2009	1.2	All sections revised.
12/13/2010	1.3	All sections revised. Final Cut Pro section added for the new software update. All images updated to reflect the current software version.
01/13/2011	1.4	New modifications made for software version 5.0.x. New pictures added.
06/22/2011	1.5	New DCNC image and information added.
08/04/2011	1.6	Warranty link redirected to new website.
10/06/2011	1.7	Section 4 modified.
03/15/2012	1.8	Section 3.3.1.1 modified. New Doremi logo added.
06/13/2012	1.9	All sections modified.
07/19/2012	2.0	Sections 4 and 5 modified.
10/30/2012	2.1	All sections modified.
12/17/2012	2.2	Section 3.3 modified to include new CinePlayer software. Section 3.4 edited.